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# The CHEMIST AND DRUGGIST

for RETAILER - WHOLESALER - MANUFACTURER

Established 1859

28 Essex Street, Strand, London, W.C.2

Registered as a Newspaper

No. 3058  
VOL. CXXXIX

SEPTEMBER 17, 1938

Annual Subscription (with  
Diary) 20/-, Single Copies 9d.

## HOT WATER BOTTLES

*that will increase your sales!*

The name DUNLOP, world-famed for service and satisfaction, is your finest assurance for rapid and easy selling of these quality hot water bottles. They are made in styles and prices to suit every customer . . . they are backed by National advertising. Order your stocks now.

The DUNLOP ALL-RUBBER MOULDED BOTTLE illustrated is high pressure moulded from the toughest rubber and can be sold with the utmost confidence that it will give typical "Dunlop" satisfaction. "Cellophane" wrapped.

Fixed Retail Price **2/11**New type, with handle **3/3**

- DUNLOP ANIMAL SERIES HOT WATER BOTTLES. Fascinating for children. "KITTY," "TEDDY," "BUNNY," "DOGGY." Uncovered, each **3/11**

Covered in velvet, each **5/9**

- "RED RIDING HOOD," including red head cover each **4/6**

- DUNLOP MOULDED FABRIC INSERTION BOTTLE New type, with handle **4/6**

- DUNLOP HAND-MADE FABRIC INSERTION BOTTLES In white from **4/6** In red, from **4/11**

- DUNLOP COSIMAX. An entirely new kind of hot water bottle Standard size **10/6** Senior size **14/11**

Specially shaped Cosimax Footwarmer **10/6**

*Dunlop*  
**ALL-RUBBER  
MOULDED BOTTLE**  
**2/11**  
In Red only.

# Dunlop

## HOT WATER BOTTLES

DUNLOP RUBBER COMPANY LIMITED (General Rubber Goods Division), CAMBRIDGE STREET, MANCHESTER, 1



*A STANDARDIZED  
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*Natural  
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**NADOLA**  
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Each gramme represents  
1000 International Units  
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Each capsule represents  
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A bottle of  
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Certainly, Madam. . . . .  
Have you ever tried "Milk of Magnesia"  
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The  
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Laxative  
Antacid



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"Milk of Magnesia" is the registered trade mark of Phillips' preparation of Magnesia



*Get ready for*

# BIGGER SALES! & MORE PROFITS!



FOR SORE THROAT,  
TONSILLITIS, CROUP,  
COUGHS, COLDS, ETC.

MAC  
BRAND

ANTISEPTIC  
THROAT SWEETS

MACLEANS LTD GREAT WEST ROAD, LON

BUY  
DIRECT AND  
GET  
**14**  
TO EVERY  
DOZEN

"Macs" have been on the market now for three years—years in which they have become firmly established in popularity. And now we have made two moves which are going to make this product even more popular with the public and the profession. Firstly we are planning

## FORCEFUL NATIONAL ADVERTISING

throughout the winter months. This advertising will stimulate heavier sales than ever for Mac Brand Antiseptic Throat Sweets, because they now have three years' success behind them. And secondly—and most important to our retail friends—"Macs" are now sold to all direct buyers at 14 TO THE DOZEN and give a profit of nearly 33% on turnover! These new terms make it even more worth while to push this product.

### ★ BONUS TERMS — IMPORTANT

*We would remind our customers that bonus terms of 14 to the dozen are only available to those who buy **direct** from us. Minimum quantity to qualify for bonus, 1 dozen per size.*

### GET MORE SALES WITH A WINDOW DISPLAY!

Generous supplies of attractive show material will gladly be sent on request.

**PRICES:** 4/9d. per doz. Retail 6d. each  
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**MACLEANS LTD., GREAT WEST ROAD, BRENTFORD, MIDD.**



# Crookes' HALIBUT LIVER OIL



IN 12 COLOURS

APPEALING

NEW

SHOWCARD

**70% profit on outlay  
— from special bonus terms**

Designed to attract the interest of every mother, this new showcard will bring more people than ever into your shop to buy Crookes' Halibut Liver Oil. It is beautifully printed in 12 colours and will link your shop with our nation-wide advertising in all the important daily, weekly and monthly journals.

Send to-day for your free showcard — and ask for full details of the attractive bonus terms which show a profit of 14/- for every £1 outlay.

THE CROOKES LABORATORIES (British Colloids Ltd.) PARK ROYAL, LONDON, N.W.10



# *A Service to Chemists*

## THE BRITISH DISTRIBUTORS for *Lederle* LABORATORIES INC. NEW YORK invite Chemists, their Assistants and Apprentices to register for the FREE **MONTHLY BULLETINS**

SINCE the opening of the present century rapid developments have been effected in all branches of Medical Science. Indeed the whole subject has become so extensive that for the Medical Profession some degree of specialisation is essential, but for the practical Pharmacist a complete and concise review of the more recent developments has become a necessity.

The Bulletins of the Lederle Laboratories are compiled each month as an attempt to correlate current clinical experience with the intensive laboratory research which has been obtained within recent years in the field of Biological Therapy. They will instance the very latest researches and records from every prominent Medical Centre giving cases, histories, and comparisons in respect of prevalent diseases and will to all intents and purposes constitute a complete course in this most important subject.

The first of these Bulletins will deal in general with the established facts of immunity and broadly outline the underlying principles of Biological Therapy.

In subsequent issues it is hoped to review individual diseases, bringing forward modern conceptions as to their specific treatment.

Applications in reply to this announcement will bring a detailed résumé of these Bulletins which will continue for 12 months from 1st October 1938. From and including that date all who register will receive on the 1st of each month a complete outline of Biological Practice in respect of a particular disease or diseases which experience has taught are prevalent at the time.

At the end of the Course the complete set of Bulletins will constitute a valuable and unique work of reference for the Chemist. At all times the Registered Chemist is at liberty

OF THE

## *Lederle* **LABORATORIES**

to call upon the sponsors of this service to answer any problems which arise in the course of his practice so that he has at his command a constant source of scientific and thoroughly up-to-date information. Depending upon the extent of the Chemists' co-operation the service will be made permanent and developed to meet the requirements of the Chemist.

The Bulletins will at the termination of their issue be kept up to date by records of new advances which will be sent for inclusion under the proper titles, and a convenient form of index will be provided.

The sponsors of this scheme believe it is to be the most valuable free service ever offered to the serious Chemist and they urge all who value a sound medical supply practice to write at once for the Résumé and Registration forms which are now available. Assistants and apprentices who apply are asked to get their request countersigned by their employers. Address inquiry to—



(LEDERLE BIOLOGICAL DEPT)

**The Old Medical School LEEDS**



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**METHYLATED SPIRIT**ALL STRENGTHS  
IN STOCK.PROMPT DELIV-  
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"Regulator" 308

"Oiltite" Amber Square 800

"Oiltite" Blue Poison 801

"Fecher's Hollopeg" Regd No. 768529. & 798768.

For Iodine

For Factory Eye Drops

## NEW REDUCED PRICES of OILTITE DROP BOTTLES

	$\frac{1}{4}$	$\frac{1}{2}$	1	2 oz.	
THE "REGULATOR"	old 4/-	4/3	5/-	6/-	doz.
	new 3/6	3/9	4/-	5/6	"
THE "OILTITE" SQUARE	old 4/9	5/3	5/9	6/3	"
	new 4/-	4/3	5/-	6/-	"
BLUE POISON			new 4/-	4/6	dozen

## FOR IODINE OR EYE DROPS FOR FACTORY USE "HOLLOPEG" BAKELITE CLOSURES ARE PRACTICALLY STANDARD TO-DAY

THE "HOLLOPEG" CAP GIVES GRIP TO THE FINGERS, MAKES BRUSH OR GLASS PEG FOOLPROOF AND COSTS NO MORE. PRICES:—

	$\frac{1}{4}$	$\frac{1}{2}$	1	2 oz.	
For IODINE:	WHITE 2/-	2/6	3/-	3/9	doz.
	AMBER 2/4	2/9	3/3	4/-	"
For EYE DROPS:					
	GREEN, BLUE or AMBER	—	2/9	3/3	—

From Wholesale Houses or from the Makers:

**M. J. FECHER LTD., 10 Dod Street, London, E.14**

'PHONE: EAST 3228

ESTABLISHED 1891





**VENO**  
Sales..  
**Profits**

**VENOS** BRAND  
LIGHTNING  
COUGH  
CURE  
THE IDEAL FAMILY REMEDY

**DR. CASSELL'S**  
TABLETS

**Phensic**

**Germolene**  
Aseptic Ointment

*Lots* **in**  
**a name!**

**H**ARDLY a home in the country but does not know, trust and rely upon these four famous VENO products. Veno stands for thousands of pounds worth of business over the counter . . . EVERY WEEK! Are you getting YOUR share? Are you making a good display of these profitable lines? This is the season when sales soar . . . so look to your stocks and drop us a card for latest show material, FREE on request.

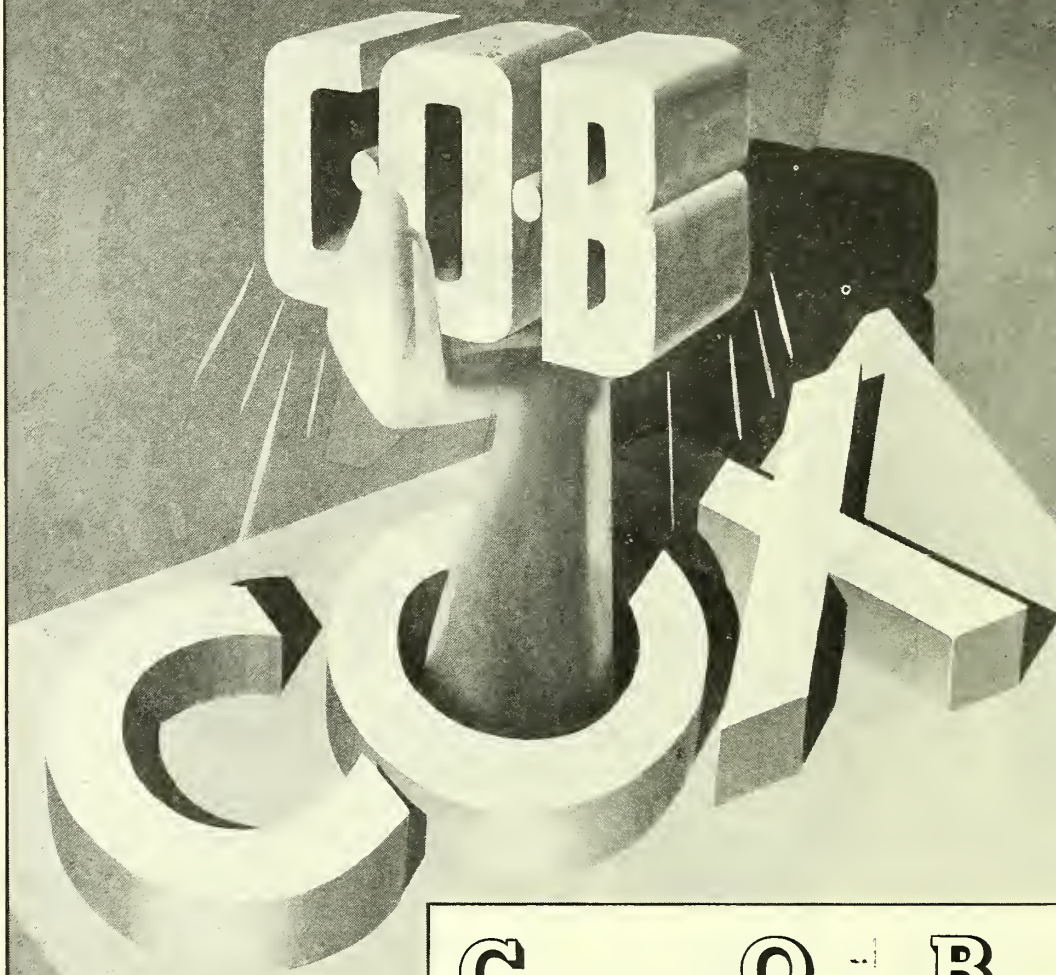
- **VENOS COUGH CURE**  
BRAND
- **DR. CASSELL'S TABLETS**  
BRAND
- **GERMOLENE OINTMENT**  
BRAND
- **PHENSIC**  
BRAND

**VENO DRUG CO. LTD.**

**CHESTER ROAD · MANCHESTER · 16**



# THE POWER BEHIND YOUR PHARMACY



**C**HEMIST'S **O**WN **B**RAND

— THE GREATEST —  
SELLING & ADVERTISING SCHEME  
to assist the Pharmacist ever presented

*write NOW for full details to:-*

**ARTHUR H. COX & CO. LTD., BRIGHTON 7.**





# FAIR

## "do's"

- **do** not fail to visit the Hair and Beauty Fair this year! It will be the largest fair in trade history—the world's largest display of everything connected with perfumery, beauty preparations, toilet and fancy goods.
- **do** make a note of the date—next week, September 20-29—and make certain of spending at least one day at the Fair. This date is specially chosen so that you may see all the best ideas of the year before making your plans for a record Autumn and Christmas season.
- **do** you know that buyers and representatives from all over the world will be at the Fair? And that all the leading perfumery and toilet goods manufacturers will be exhibiting?
- **do** remember that this is the year's greatest opportunity for ensuring your future prosperity. In these days of fierce competition it is of vital importance that you keep abreast of the times and the trade.

# HAIR & BEAUTY FAIR

EMPIRE HALL *Olympia* SEPT. 20-29



## THE EVER-INCREASING SUCCESS OF EVE SHAMPOO IS DUE TO THESE

# 5 BIG POINTS



### 1 EVE BEAUTIFIES

— leaves hair soft, lustrous, in perfect *natural* condition.

### 2 EVE BENEFITS

— both hair and scalp — frees the hair from dandruff, with its attendant troubles; enables scalp pores to breathe, glands to function normally.

### 3 EVE IS SAFE

— no harmful alkali. Mild, yet efficient, Eve cannot affect the structure of the most delicate hair. Doctors recommend Eve for children.

### 4 EVE CLEANSSES

— gently, yet quickly and thoroughly. No soap in Eve, therefore no unhealthy lime-scum.

### 5 EVE AIDS SETTING

— because it leaves no clogging deposits to make hair "difficult". More, Eve cleanses away all scalp waste and dandruff—makes hair manageable.

If you have not already seen "Lovely Hair" by Pierre Auguste send your trade card to Joseph Watson & Sons Ltd., Department W.16, Leeds. You will receive your copy by return post.

You may base a new shampoo on the finest theory, but the number of *regular* customers you make when you sell it is the final test of its worth. That type of customer—tens of thousands of them — Eve Shampoo Powder has gained in its three years of public trial. Now, further satisfied Eve users are being created by Eve Shampoo CREAM — the same shampoo in an easy-to-use tube, a handy 6d size.

There must be sound reasons for such rapid success, such solid success. Eve Shampoo has five reasons—the *five big advantages* which made it the first trouble-free soapless shampoo on the market.

## DISPLAY AND RECOMMEND

**Eve Shampoo**  
**CREAM 6<sup>D</sup>** THREE SHAMPOOS  
**POWDER 2<sup>D</sup>** PER PACKET



# Preview of a new range of Christmas Gifts



## MAJOR AWARD for artistic presentation

The new FONTAINE JAPONICA is the result of an attempt to interpret modern standards of taste. The success of this effort is effectively demonstrated by our winning the Major Award for the outstanding merchandizing achievement . . . . The range is now ready for the market—in ample time for you to benefit from Fontaine's undoubted attractiveness to those seeking the perfect Xmas gift. Exclusive advertising will begin next month in the high-class women's papers.

We reproduce above a few of our 50 Gift coffrets, and should appreciate the opportunity of sending fullest details on request to Fontaine (Perfumes) Limited, Castle Bromwich, Warwickshire.

1 *Dusting Powder and Bath Foam (also packed separately).*

2 *Gift coffret containing two Toilet Soaps, two Bath Cubes, Bath Essence and Talcum Powder.*

3 *Perfume in two sizes.*

4 *Bottle of Talcum Powder, Tonic Bath Salts and Bath Essence (also packed separately).*

5 *Gift coffret containing Bath Soap, six Bath Cubes and Bottle of Tonic Salts.*

# Fontaine JAPONICA



**FAMILIES EVERYWHERE  
ARE BUYING**

*3 generous  
shampoos  
for 6d!*

**BRYLFOAM**

THE *Family* SHAMPOO

● No wonder BRYLFOAM's selling so well! It's such excellent value for money! Moreover, families everywhere are discovering that BRYLFOAM's the ideal shampoo for every type of hair, dry or greasy—man's, woman's or child's. Send for display material NOW! And link up with the National advertising for this profitable line.

**Not sold by  
Chain Stores  
or Grocers**

**37½% PROFIT ON EVERY TUBE!**

PLEASE POST THIS COUPON

To: The County Perfumery Co.,  
North Circular Road,  
West Twyford, London, N.W.10

Please ask traveller to call,

NAME .....

ADDRESS .....



**And Now—  
HERE'S  
ARCANCIL**

ARCANCIL—the new eyelash cosmetic—comes from Valdor, Paris, makers of the famous Guitare lipstick. Don't miss the opportunity to repeat the brilliant record Guitare have established. ARCANCIL has met with tremendous demand in France—and the stage is set to win the same popular demand here. ARCANCIL does not smart, nor run. It is based on turtle oil—it comes in generous sizes, in modern shades, plus one special colourless kind for the women who dislike make-up. ARCANCIL will be supported by the same clever advertising which made Guitare such a success. The campaign breaks on October 1st in Daily Mirror, Daily Sketch, Sunday Pictorial, Evening Standard, Tatler, Vogue, Woman, Woman's Illustrated, Woman's Own, Picturegoer. This list will be added to as the campaign progresses.

Write to the sole distributors:

Chemical & Natural Products Ltd. (Dept. 102),  
Wimbledon Factory Estate, Morden Road, S.W.19

Attractive show material available

**SPECIAL BONUS OFFER for ONE MONTH ONLY**

A special bonus of an extra 10% discount will be given to all retailers placing an order direct with us before September 30th, 1938, for ARCANCIL to the minimum net value of £2.0.0

**CHEMICAL & NATURAL PRODUCTS LTD.**  
Wimbledon Factory Estate, Morden Road, S.W.19

**ARCANCIL**  
  
**DOES NOT SMART**



*There's money  
in this new*



It's NEW — something that every woman will be eager to buy — a **complete** hair beauty outfit at a popular price — 6d. It consists of the famous Nestlé Colorfoam Shampoo which gives the hair a flower-like fragrance, and Colorinse which perfects the shade as it completes the cleansing. There is an outfit for every shade of hair. Extensive National Advertising commencing in October will send customers to your shop. So order this profitable line now from C. Nestlé & Co. Limited, 465-467 Holloway Road, London, N.7, or your usual wholesalers.

Display and sell this attractive  
NESTLÉ "Colorinse"  
**HAIR BEAUTY  
OUTFIT**



Announcement  
to the Trade

# "GAIETY"

## BEAUTY PREPARATIONS

H & H Trading Agencies Ltd. have acquired entire control and distribution of Gaiety Beauty Preparations, and in future all orders and correspondence in connection therewith should be addressed to us at New Bond Street.

The proprietors intend to work on an entirely new policy, which will include an extensive advertising campaign, additions to the range, and a general improvement in the quality of the material. Terms on application to :—

**H & H TRADING AGENCIES LTD**  
**131-134 NEW BOND ST., LONDON, W.**

Telephone : MAYfair 4323



THE EXTENSIVE PUBLICITY FOR

## LANALOL HAIR FOOD

in the National Press, covering millions of readers weekly, has created enormous interest

### LOOK TO YOUR STOCKS

Lanalol is obtainable in two forms: No. 1 With Oil (yellow label), No. 2 Without Oil (green label). 2/6 per large bottle.

Chemists will profit by keeping Lanalol well to the front. This product is supplied on strictly P.A.T.A. terms from all Wholesale Houses.

**LANALOL LTD.**

57-60 Holborn Viaduct, London, E.C.1



# WANIE BLADES

KEEN EDGES  
KEEN PRICES

Your profit is 33½ to 45% every time you hand a customer a packet of Wanie Blades.

THREE HOLE TYPE

8/- gross. Retail 12 for 1/-

AUTO TYPE

9/- 100. Retail 10 for 1/8

EVER READY TYPE

9/- 100. Retail 10 for 1/8

DISPLAY SHOWCARDS  
FREE TO ALL STOCKISTS

Dealers and Wholesalers  
should write for FREE  
SAMPLES and Trade Terms.

**LONDON & PROVINCIAL FACTORS LIMITED**  
146, THEOBALDS ROAD, LONDON, W.C.1.  
and at 16 Withy Grove, Manchester.

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(Established 1908)

An Illustrated Monthly Review of the  
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The regular publication (in English and Spanish as well as in French) of technical and practical articles on Essential Oils and Synthetic Perfumery Products is a feature of this popular Trade Journal

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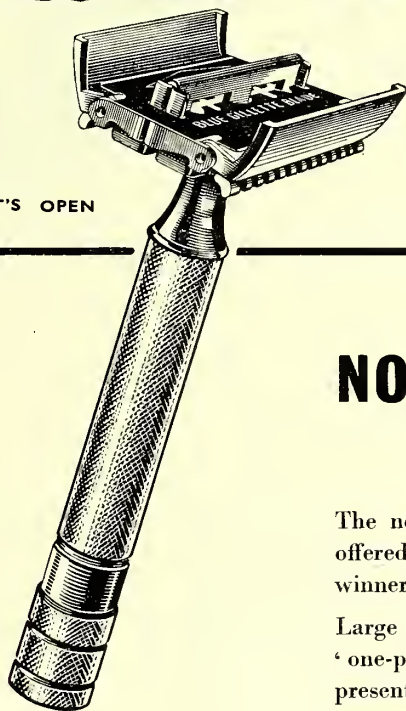
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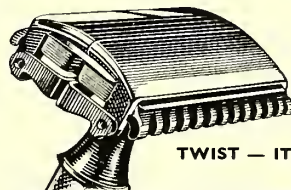
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# new! Popular models of Gillette's 'one-piece' razor



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## NOW! SETS FROM

# 6/-

The new Popular Models of the Gillette 'one-piece' razor are offered in three different packings as described. Here are real winners selling at popular prices within the reach of everyone.

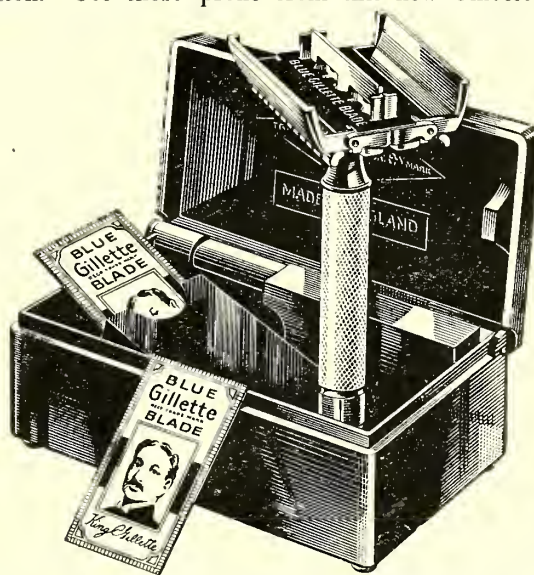
Large space advertisements will announce the new Gillette 'one-piece' razors to your customers. Their appeal as Christmas presents will be widely advertised in the leading National and Provincial papers. So place your order *now*. Display the new sets in your windows. Keep a set on the counter for demonstration. Its simplicity will fascinate and create the desire for possession. Get more profit from this new Gillette business!

**NO. 45 SET** — contains the new Gillette 'one-piece' razor (Popular Model) — no loose parts, no separate pieces to assemble. Complete in blue moulded case with three Blue Gillette blades . . . . . **6/-**

**NO. 46 SET** — contents as No. 45 but gold-plated razor in handsome white moulded case . . . . . **7/6**

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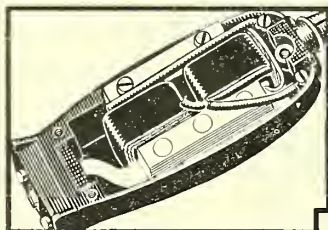




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New — trouble-free — the only Dry Shaver specially designed for British circuits made and tested in a British factory — No complicated motor to get out of order — SERVICE PROBLEMS ELIMINATED — Two cutting edges in plain sight all the time (an exclusive feature) GUARANTEED FOR 12 MONTHS.

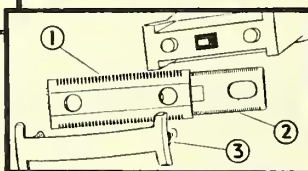
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ONLY**42/-****POLICY**

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Bottles  
Handbag

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 Small ... 2/6 ... 18/-  
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SIZE	RETAIL	TRADE
6 x 10	4/11	3/3
8 x 10	5/6	3/8
8 x 12	5/11	3/11½
10 x 12	6/11	4/7½

 P.A.T.A. Price-Protected.

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Retail Price -	- 4/11 each
Trade Price -	- 3/4 "

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Trade Price -	- 2/6 "

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**EDINA.** The extension on the filler acts as a handle when filling or, when buttoned over, as a protection to the feet. Obtainable in Blue, Green or Cherry. In transparent envelope. 

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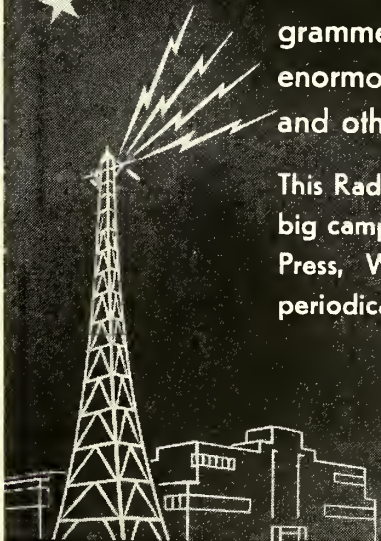
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SANDRA—Can she escape the terrible fate planned for her?



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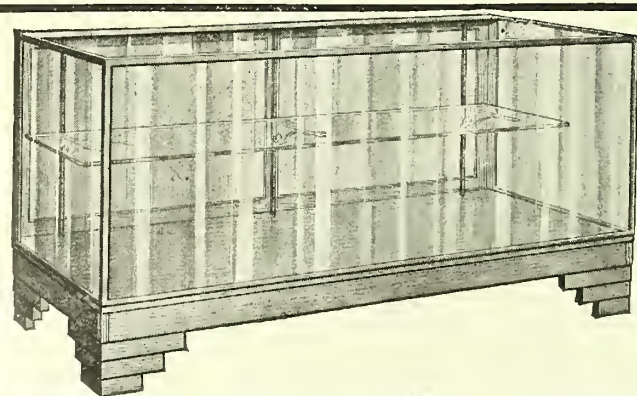
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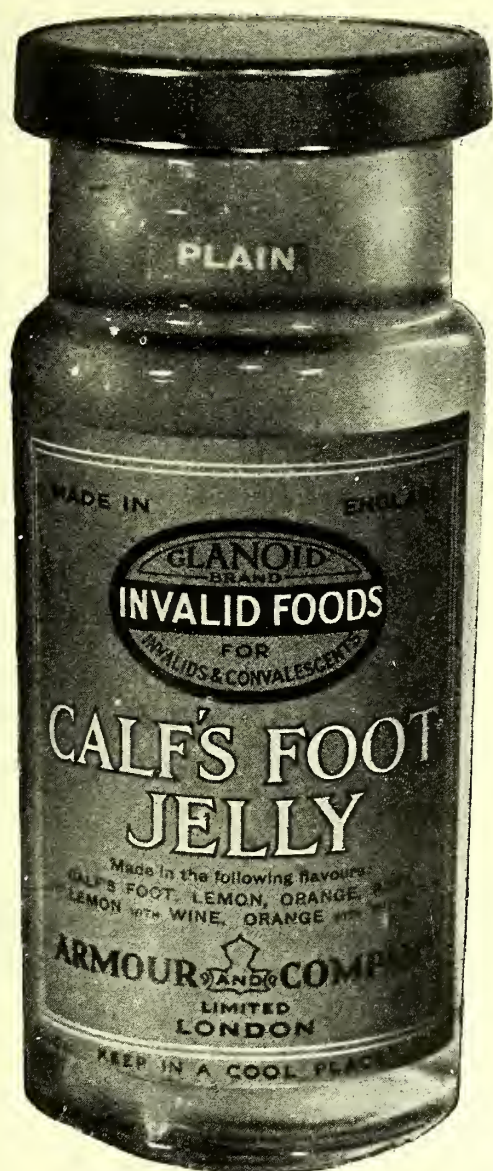
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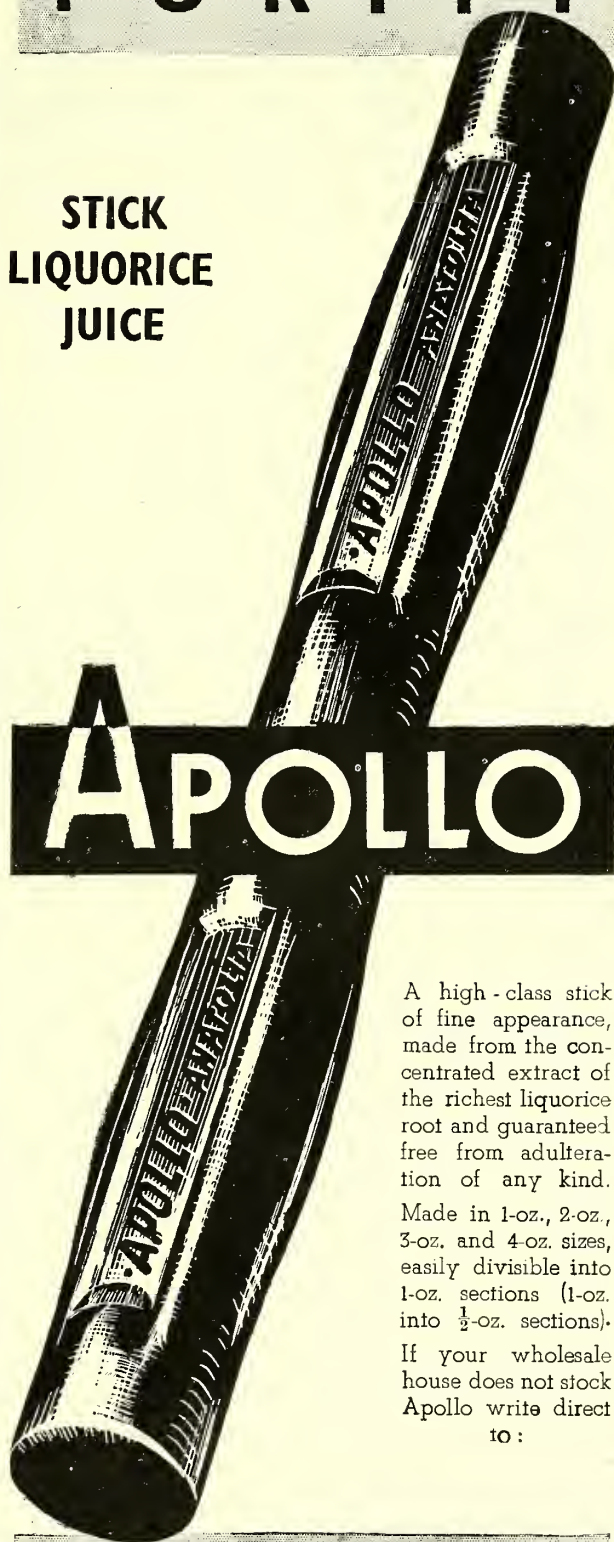
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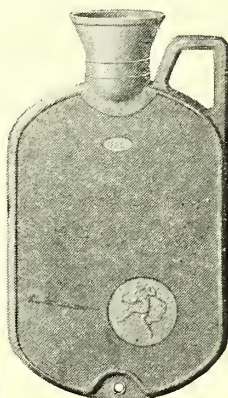
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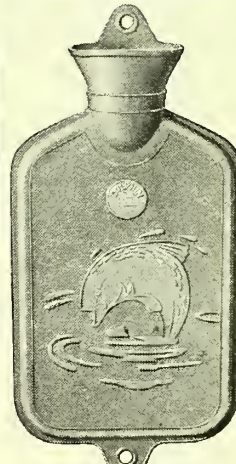


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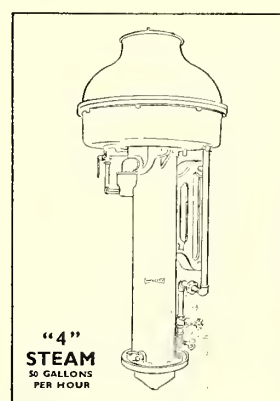
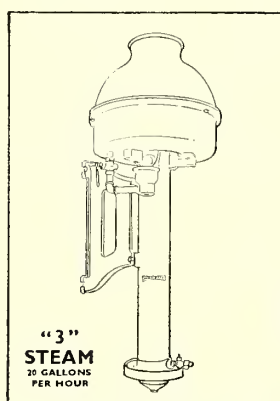
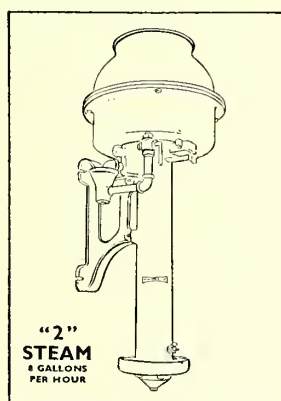
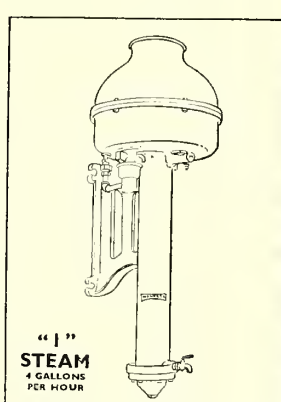
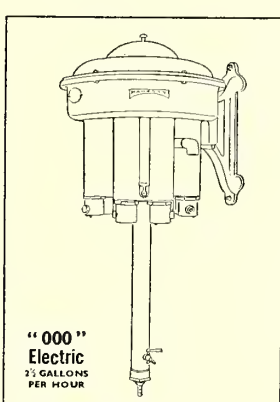
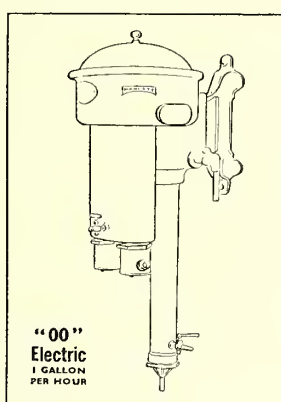
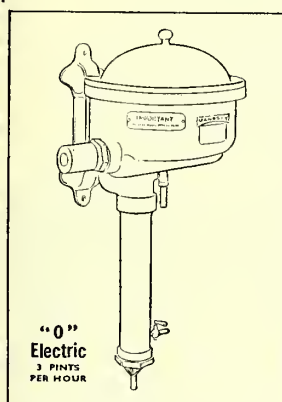
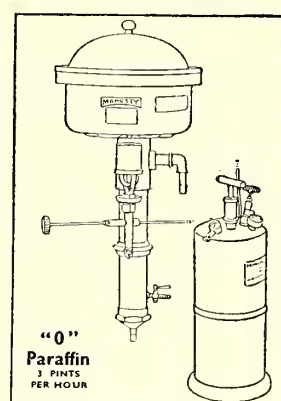
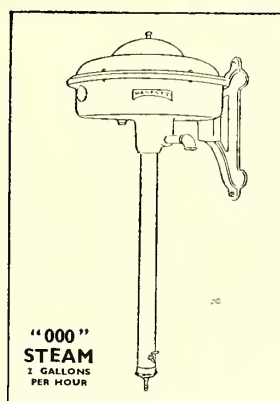
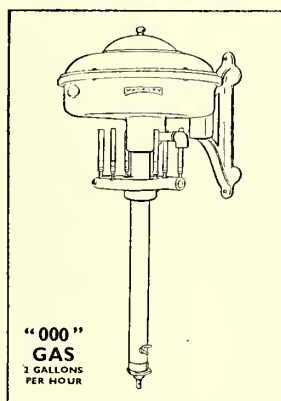
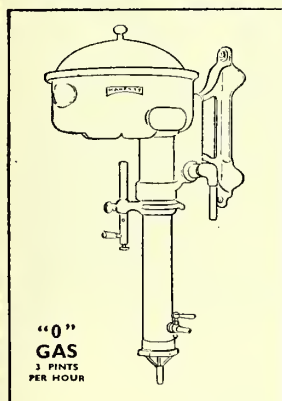
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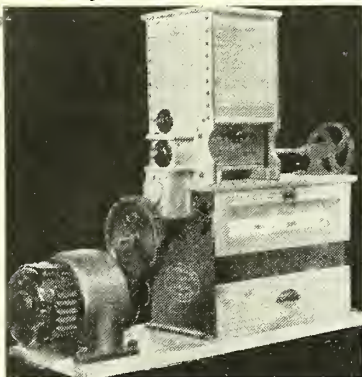
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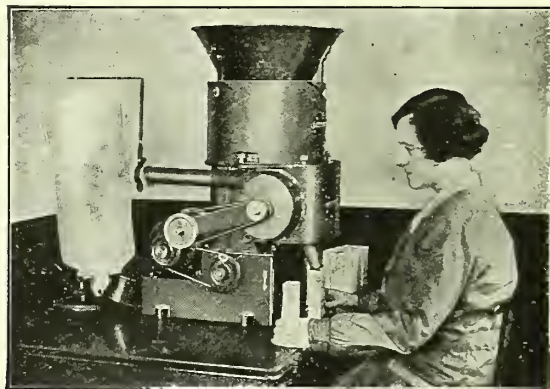
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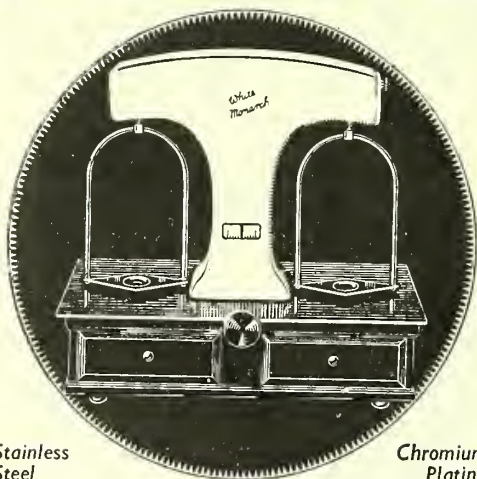
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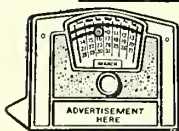
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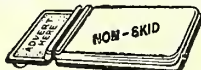
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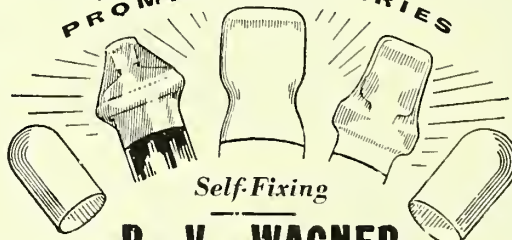
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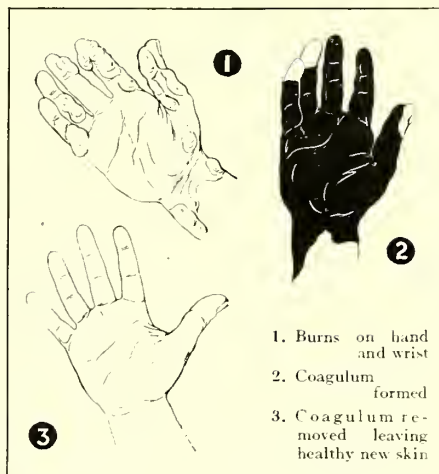
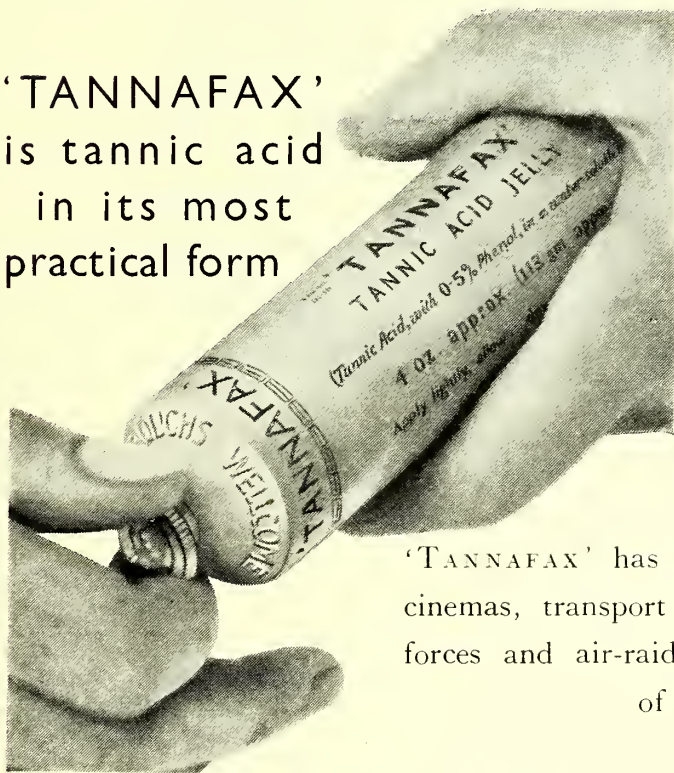
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## News of the Week

### Proprietary Articles Trade Association

ADDITION TO PROTECTED LIST.—Parke, Davis & Co., Ventron capsules, 50's, 8s.; 67s. 6d. doz. Prices in Ireland (Eire), 8s. 2d.; 68s. 8d. doz.

DELETIONS.—Parke, Davis & Co., Crysto-Vibex tablets (formerly known as Vibex tablets).

### Key Industry Duty Exemption Notices

The Board of Trade give notice that the question of the renewal of all exemption orders made under Section 10 (5) of the Finance Act, 1926, which expire on December 31, 1938, is now under consideration.

Any communication should be addressed to the Principal Assistant Secretary, Industries and Manufactures Department, Board of Trade, Great George Street, London, S.W.1, on or before October 12, 1938.

The Board of Trade has received an application under Section 10 (5) of the Finance Act, 1926, for an Order exempting CELLULOSE TRIACETATE from liability to key industry duty.

Any communication should be addressed to the Principal Assistant Secretary, Industries and Manufactures Department, Board of Trade, Great George Street, London, S.W.1, before October 14, 1938.

### Huddersfield

JEWEL OF OFFICE.—Mr. Norman Lander (chairman, Huddersfield Branch, Pharmaceutical Society) was invested with his jewel of office by Mr. J. F. McNeal (a member of the Society's Council) at a meeting of the branch on September 1. Prior to the investiture, Mr. McNeal presented Mr. David Haigh, best student of the year attending the pharmaceutical classes at the local Technical College, with the branch prize (two books on pharmacy). Mr. McNeal complimented Mr. Lander on being the first chairman to wear the jewel, and suggested that the names of former chairmen should be added to the ribbon. Mr. Lander, in reply, said he had taken an active interest in pharmacy since 1920, when he was secretary of the old Bradford Association; he had called the first meeting of the Bradford Branch of the Pharmaceutical Society. An address on "Pharmaceutical Matters of Interest" was then given by Mr. McNeal, who was cordially thanked on the motion of Mr. E. Thomas, seconded by Mr. J. L. Murgatroyd.

### London

GOLF.—The London Chemists' Golfing Society held two competitions at Oxhey on September 8 for the Yeast-Vite prize (medal) and the Rowland Staggs prize (bogey). Mr. B. F. Tisdall returned 86-16=70 (four strokes under bogey) to win the Yeast-Vite prize, and the Rowland Staggs prize for the best bogey score was won by Mr. F. A. Bell (three up). The vice-captain (Mr. F. E. Lever) offered a special prize of a golf club

to the runner-up in the medal play; Mr. W. H. Usher was adjudged the winner with 87-16=71. The leading scores were:—

Medal		Bogey	
B. F. Tisdall	86-16=70	F. A. Bell	3 up
W. H. Usher	87-16=71	B. F. Tisdall	2 up
F. A. Bell	84-12=72	W. H. Usher	1 up
G. P. Crang	85-10=75	G. P. Crang	1 down
A. E. Willmer	90-12=78	E. C. Pryce	2 down
J. Deas	92-14=78		
E. C. Pryce	87-8=79		
P. G. Hunt	90-10=80		

The final meeting will take place at North Middlesex Golf Club on September 29. Picture, p. 279.

### Manchester

GOLF.—A competition arranged by the Manchester and District Pharmaceutical Golfing Society for a prize presented by Bayer Products, Ltd., was played at Sandiway Golf Club on September 7. The leading returns were:—Mr. W. E. Phillipson, 76 (Bayer prize); Mr. S. M. Bostock, 77 (second prize); Mr. A. N. Aitken, 78. One of the competitors, Mr. C. L. Compston, holed in one at the thirteenth (134 yards). Mr. Edenborough presented the prizes, and a vote of thanks to Messrs. Bayer was proposed by the captain (Mr. W. J. Hope) and seconded by Mr. I. Stout. Members were entertained to tea by Messrs. Bayer.

LISTED SELLERS.—The annual report of the Medical Officer of Health for the city of Manchester, recently issued, records that there are 742 listed sellers and 840 deputy sellers of poisons under the Pharmacy and Poisons Act, 1933. These include: Grocers, 450; hardware dealers, 150; seedsmen, nine; florists, one; horticultural and agricultural sundriesmen, eleven; herbalists, sixteen; drug stores, twenty-seven; hairdressers, thirty-three; miscellaneous, forty-five. Forty applications were received during the year; in no case was it necessary to refuse to enter or to refuse to retain a name on the list. The selling of poisons was discontinued by sixty-nine persons. Visits to premises for the purpose of investigating applications, inspecting poison books and unregistered premises numbered 1,384.

### Middlesbrough

N.H.I. PAYMENTS RESOLUTION.—A meeting of the Middlesbrough and District Chemists' Association was held on September 6, Mr. P. Gillespie presiding. A discussion took place with regard to the new National Health Insurance contract, and Mr. Hollings (a member of the Pharmaceutical Committee) outlined the two alternatives that are to be discussed at the forthcoming Conference in London. It was suggested that the

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matter was too important for one section of the craft alone to decide; all engaged in pharmacy viewed the outcome with misgivings. Mr. Bray contended that chemists should hold out for a more satisfactory dispensing fee in addition to having the discounting eliminated. Mr. Brackenbury and others approved of the new contract, as they feared further discounting in 1939-40, since the number of juveniles would tend to fall off as greater numbers remained longer at school; the number and cost of prescriptions was rising every year, it was stated. The meeting resolved "That while the present fees are not accepted as adequate, we accept—under protest—a five-year contract from January 1, 1939, at the present fees, and with full payment." Mr. W. A. Thomson recommended that greater attention should be paid to the wording of future contracts, since the definition "abnormal epidemic" in the present contract prevented chemists from obtaining any reimbursement for the deficit of 1937, the epidemic of that year having been defined as sporadic by the Ministry of Health. While there was general dissatisfaction with the terms, it was agreed that to get rid of the discounting was in itself a step forward. Methods of advertising chemists' services to the public were discussed, and schemes already in force in different parts of Yorkshire were considered. Many were in favour of co-operative advertising by means of handbills, and other members spoke in favour of utilising systematically the local press and of taking advantage of the services of the Pharmaceutical Society's public relations officer. Mr. W. A. Thomson suggested that handbills should be circulated from door to door, but Mr. R. MacDonald Murray pointed out that this type of advertising would tend to lower the status of the pharmacist rather than raise it. A special meeting of the executive committee to deal with advertising is to be held. Concern was expressed at the attitude of a multiple firm of grocers with a large number of branches endeavouring to persuade the public to buy nationally advertised medicines from them, and in return presenting the public with special trading stamps. It was reported to the meeting that the Proprietary Articles Trade Association were taking action in the matter.

### Portsmouth

**ANNUAL MEETING.**—The twenty-ninth annual meeting of the Portsmouth Chemists' Association was held on September 7, Mr. H. A. Mecoy (president) in the chair. General regret was expressed at the absence through illness of the immediate past-president (Mr. W. L. B. Murray). The balance sheet showed a substantial balance in hand. The following officers were elected:—*President*, Mr. H. A. Mecoy; *Vice-President*, Mr. T. A. Johnson; *Treasurer*, Mr. G. W. Darling; *Secretary*, Mr. F. H. Ruoff. It was agreed to make the following donations:—*Pharmaceutical Society's Benevolent Fund*, five guineas; *Orphan Fund*, two guineas; *Chamber of Commerce*, one guinea; *Early Closing Association*, one guinea; *Surgical Aid Society*, three pounds. Messrs. Black, Banks, Chamberlain and Trower were elected to membership of the Association. The annual report was approved and a vote of thanks to the officers and committee was accorded.

**PHARMACEUTICAL COMMITTEE APPOINTMENTS.**—The annual meeting of the Portsmouth Pharmaceutical Committee was held on September 7, when the following appointments were made:—*Chairman*, Mr. H. A. Mecoy; *Vice-Chairman*, Mr. T. A. Johnson; *Secretary*, Mr. F. H. Ruoff.

### Thames Valley

**POST-GRADUATE INSTRUCTION.**—The education committee recently appointed by the Thames Valley Pharmacists' Association has now completed arrangements for a post-graduate course for its members, to be held during the coming winter session. The syllabus, which was arranged by the Dean of the College of Pharmacy of the Pharmaceutical Society, comprises eighteen lectures on sterilisation and physiology. The lectures will be given at the Health Clinic, Knights Park, Kingston-on-Thames, commencing on October 6 at 8.45 p.m.; fee for the course, £2 7s. 6d. The lecturers are Messrs. E. R. Withell, B.Sc., B.Pharm. (sterilisation) and L. G. Goodwin, B.Sc., B.Pharm. (physiology). Demonstrations will accompany each lecture.

### Miscellaneous

**WINDOW SMASH.**—A window at the premises of Boots, Ltd., Sittingbourne, was broken by a bullock recently.

**N.H.I. DENTAL BENEFIT.**—Dental Benefit Amendment Regulations, 1938 (P. and S.R. & O. 775), have been issued (H.M. Stationery Office, price one penny). The regulations provide for an increase in the fee for scaling and treatment of gums from 5s. to 7s. 6d.

**INQUESTS.**—At Poplar, recently, a verdict of death by misadventure was returned at an inquiry into the circumstances attending the death of Ellen Elliot, Lamprell Street, Bow. A daughter said Mrs. Elliot was given Prontosil tablets for headache; she eventually became ill and was taken to hospital. Dr. Skene Reith, pathologist, said that the dose given had been well within the official dosage.—At Poplar, on September 8, the East London coroner returned a verdict of death from luminal poisoning at an inquest on Mrs. Annie Button. Evidence was given that the woman attended the West End Hospital for Nervous Diseases and was given a supply of tablets sufficient for six weeks. The coroner stated that there was insufficient evidence to show the state of her mind at the time she took an overdose of the tablets.

**ASSOCIATION OF PHARMACEUTICAL EMPLOYEES.**—Under the auspices of the Association of Pharmaceutical Employees (a branch of the Shop Assistants' Union), a national conference of organised pharmaceutical employees of Timothy Whites & Taylors, Ltd., was held in London on September 11. The following resolution was unanimously adopted:—"This conference, representative of the organised pharmacy employees of Timothy Whites & Taylors, Ltd., records its conviction that only by independent organisation inside the Association of Pharmaceutical Employees can the problems relating to wages and conditions of employment of the staff concerned be effectively dealt with. It draws the attention of the staff to the fact that, in any legislative machinery which may be established for the regulation of wages and conditions in the retail distributive trades, representation would be given only to *bona-fide* trade unions, independent of any employer. In such circumstances the suggestion that a 'company' union would have any claim to such representation is misleading and inaccurate. Finally, this conference registers its whole-hearted opposition to the formation of any 'company' union which would deprive the staff of that proper freedom of expression which is derived only from independent organisation. It resolves to do all that lies within its power to extend further the influence of the Association of Pharmaceutical Employees and urges every pharmacy employee in the service of the company to organise inside the Association in order that their interests can be properly and effectively safeguarded." The conference decided upon steps to be taken further to develop membership among employees of the company.

**IN THE COURTS.**—At the Thames Police Court, London, on September 9, Frederick John Merralls, night watchman; Ernest George Wilkins, labourer; William John Daley, foreman; Alfred Charles Daley, labourer; and Arthur John Merralls, labourer, were charged with stealing a total of 396 barrels of resin, valued at £1,220, between July 1, 1937, and August 18, 1938, the property of the Amber Chemical Co., Ltd., from the Cubitt Town Wharf, London; and with being concerned with William Fallows, lorry driver, in stealing the resin; Fallows was further charged with receiving the resin, well knowing it to have been stolen or otherwise unlawfully obtained. It was stated in evidence that all the men with the exception of Fallows were employed by the prosecutors. Fallows used to drive a van to the wharf at night and the night watchman allowed it to enter. The other men loaded the van with barrels of resin, which was later disposed of. Fallows would remunerate each of the men with 50s. after each theft. The magistrate sentenced Fallows to three months' hard labour and remanded the other men in custody while he considered what he should do with them.—At Birkenhead, on September 7, John Jones, seaman; Robert Jones, labourer; and George Jones, unemployed, were charged with assault upon Mr. Norman Edward Tatler (Tatlers (Chemists), Ltd., 179 Borough Road, Seacombe, Wallasey). It was stated that Mr. Tatler heard a knock on the door, opened it and saw three men using the weighing machine outside the shop. One of them complained that he believed the machine weighed incorrectly, and Mr. Tatler suggested that they should weigh themselves again free of charge. Two of the men pinned him in the doorway and another struck him a violent blow. The chairman remarked that it was an utterly unprovoked assault and sentenced one of the men to three months' hard labour and the other two to fines of 40s. and 20s.

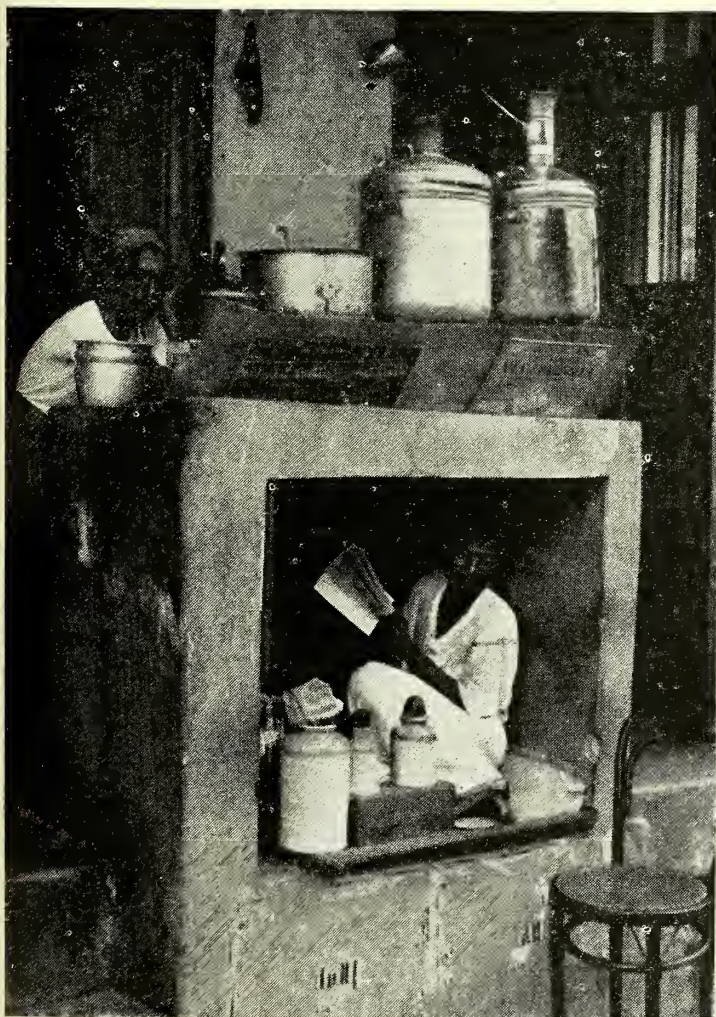
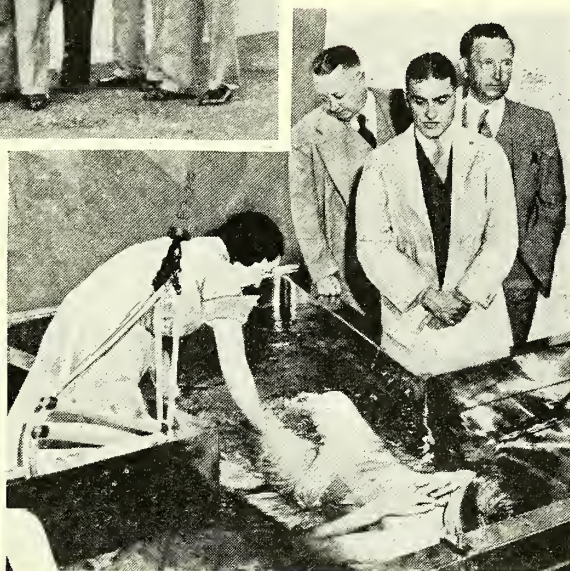


# News in Pictures

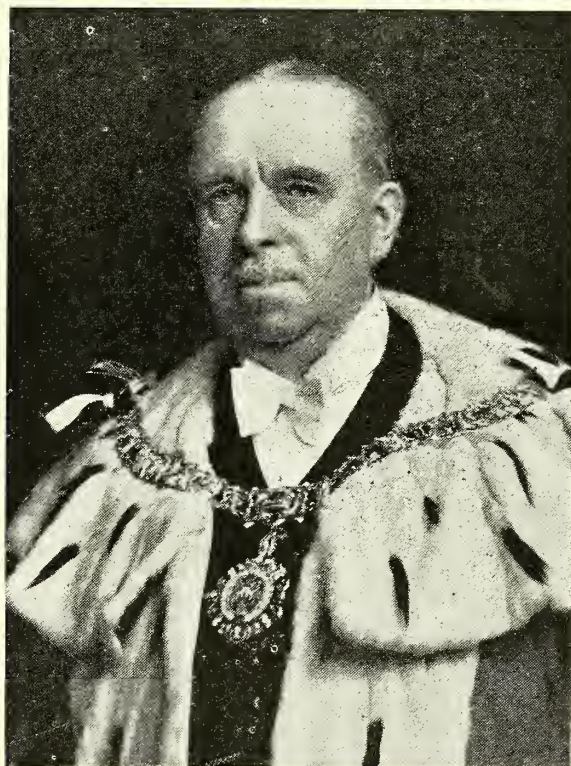


*Above.*—**LONDON CHEMIST GOLFERS**—Group photographed at Oxhey meeting of London Chemist Golfers' Society. A report of the play appears on page 277 of this issue.

*At right.*—**TREATING INFANTILE PARALYSIS**—Demonstrating an underwater-exercise method of treating infantile paralysis at Stanford University, California, recently.



**PHARMACY IN BURMA**—The proprietor of a drug store in Rangoon, Burma, awaits customers for consultation. Infusions and decoctions are soon prepared extemporaneously.



**EDINBURGH'S CHIEF CITIZEN**—The Lord Provost of Edinburgh (The Right Hon. Sir Louis S. Gumley) who officially received visitors to the British Pharmaceutical Conference.



## Scottish Notes

### Dundee

**EXHIBITION.**—At an exhibition organised recently by the Dundee Institute of Art and Technology the School of Pharmacy demonstrated processes of extracting crude drugs and the making of tablets, medicated lozenges and pills.

### Edinburgh

**GOLF.**—The Edinburgh Chemists' Golf Club held an outing at Duddington on September 7, when the following were prize-winners:—*First*, Mr. W. McIntosh, 67 (handicap 14); *second*, Mr. A. S. Cooper, 77 (14); *third*, Mr. A. H. Gillies, 80 (7); *first* (second class), Mr. George Cowie, 88 (18).

**SANITARY CONGRESS.**—Speaking on the cost of fighting disease, Sir Leonard Hill, in his presidential address to the annual conference of the Sanitary Inspectors' Association at Edinburgh on September 6, said it was computed that Britain spends no less than 285 million pounds a year on ill-health, 100 millions of this being due to workers' lost time and lessened efficiency. Vast sums now spent on quack medicines and appliances might be saved. People, for example, who are properly fed and exercised do not need purging. There is a disgraceful leniency to vendors of quack medicines in strong contrast with the penalties to which those who falsify the character of ordinary foods and drugs are liable. The conference passed the following resolution:—"This Conference requests the Minister of Health to urge upon local authorities that the duties in connexion with the Food and Drugs Act should be carried out only by officers in the Public Health Service."

## Irish Notes

### Ulster Chemists Association

The monthly meeting of the executive committee of the Ulster Chemists' Association was held at 73 University Street, Belfast, on September 6, Mr. E. A. Richey (vice-president) in the chair in the absence, through illness, of Mr. R. Linehan (president). There were also present Messrs. R. B. Abernethy, Jas. Dundee, T. A. Gibson, A. E. Johnston, Jas. McDowell, John McDowell, J. McGregor, and A. Steede. After the routine business the committee considered the details of an advertising

programme, as submitted by the advertising expert, who was present at the meeting. It was unanimously agreed, after a few minor alterations had been made, to adopt the programme as outlined, and it was arranged for the advertising to start as early as possible.

### Belfast

**GOLF.**—Mr. A. T. Hardy, Ph.C., Belfast, was amongst the competitors in the Irish Open Amateur Golf Championship, which ended at Newcastle, co. Down, on September 9.

**SHOPBREAKING.**—The premises of S. Haydock & Co., chemists' sundriesmen, 4 Marlborough Street, Belfast, were broken into on September 7, when property valued at between £30 and £40, including a number of cameras, was stolen. Chemists are requested to keep a look-out for the missing cameras.

### Miscellaneous

**SALE THROUGH CHEMISTS URGED.**—At Enniskillen Urban Council a resolution was passed recently asking the Government to prohibit the sale of "red biddy" or "toney wine," except in chemists' shops under licence.

**SCHOOL OPENING.**—The courses of instruction arranged by the Pharmaceutical Society of Ireland in pharmacy, chemistry (theoretical and practical), materia medica and botany will open at 67 Lower Mount Street, Dublin, on October 3.

**MAYORAL INVESTITURE.**—At the Cathedral of St. Nicholas, Galway, on September 11, Alderman J. F. Costello, M.C.P.S.I., mayor of Galway, was invested by the Bishop of Galway with the new gold mayoral chain.

**EXEMPTION ORDER.**—Pharmacists all over Eire have shown pleasure at the recent Exemption Order made under the Shops (Hours of Trading) Act by the Minister for Industry and Commerce (Mr. Sean Lemass) as a result of which pharmacists (who could already keep open as an Excepted Business on half-holidays for the sale of medicines, medical and surgical appliances) can in addition now sell photographic requisites, toilet soaps, perfumes, cosmetics, hair brushes, tooth brushes, nail brushes, tooth pastes, hair oils, razor blades, any other toilet requisites, and disinfectants (including insecticides, vermicides and fungicides). The lending of books or periodicals for reward, and the selling of hair nets or any other articles of haberdashery are also amongst exemptions in the new Order. The new Order meets the case strongly pressed upon the Minister by the Irish Drug Association.

# Topical Reflections

By Xrayser

### Edinburgh

All roads have led, this week, to Edinburgh, where the annual meeting of the British Pharmaceutical Conference has been held. The concise and admirably illustrated account of Scotland's world-famous capital on pp. 263-70 of last week's issue, in conjunction with the related editorial article (p. 261), must have appealed to all your readers. Edinburgh may sometimes be "West-Endy and east-windy," as a Scottish divine of a former generation is said to have declared; but its charm remains in the memory, and as an occasional visitor I recall with gratitude the invariable courtesy of its citizens. Your pages sent me back to Dr. Thomas Ferguson's contribution to your Annual Special Issue six years ago on the early history of pharmacy (and to some extent that of medicine) in Scotland. Before pharmacy became a distinct profession there was in Edinburgh a prolonged conflict of the same type as in London between physicians, surgeons and apothecaries, and during about the same period. Dr. Ferguson's article reminds me that the *cranium hominis* of the first Edinburgh Pharmacopœia, like that of the contemporary Pharmacopœia Londinensis, had to be obtained from a body which had suffered death by violence. In the next P.L., however, the stipulation as to violence was dropped: I have sometimes wondered whether that was a sign of the march of science or whether the explanation is simply that the supply of the more specifically defined sort did not suffice to "go round." In another two centuries,

or less, the present vogue for extracts derived from the organs of the cranium may in turn be superseded.

### Changes in Poisons Regulations

Pharmacists who are subject to headache of any kind will, no doubt, examine with foreboding the draft Order relating to scheduled poisons (p. 251). The satirical description by Mr. Justice Rowlatt, in a High Court case in 1931, of a certain part of the Medicines Stamp Act, 1812, as "this mass of confused, obsolete verbiage" may well come to be applied, in due time, to the Order at present before us as a draft. I think I know, for instance, what the proposed Rule 3 (3) means, but I should not like to dogmatise about it. The words "notwithstanding anything in the foregoing paragraph of this Rule," or words to the like effect, occur in three successive paragraphs. Is such complexity necessary? Cannot new substances be added to the relevant Schedules without so much flummery? I am inclined to think that one of the authors from whom civil servants derive their inspiration is Thomas Brown, a contemporary of the greater Sir Thomas with the "e": I was reading not long ago his "Nature's Cabinet Unlock'd; wherein is Discovered the Natural Causes of Metals . . ." published in 1657. In it I found a periphrasis which may well have served as a model for generations of Whitehall penmen: "volatile beasts, which do use to fly much in the air; and they are otherwise called birds." Unfortunately we are not usually given so elucidative an ending in the Whitehall examples.



# Company News

P.C. means Private Company and R.O. Registered Office

MARSTON PHARMACY, LTD. (P.C.).—Capital £200. Objects: To carry on the business of chemists and druggists, etc. R.O.: 463 Marston Road, Oxford.

PADDOCK PHARMACY, LTD. (P.C.).—Capital £500. Objects: To carry on the business of chemists, herbalists and drug merchants, opticians, etc. R.O.: 4/5 The Paddocks, Popes Lane, South Ealing, W.5.

SORBON LABORATORIES, LTD. (P.C.).—Capital £1,000. Objects: To acquire the business of a manufacturing chemist now carried on by Charles Knott at 20c, Pimlico Road, S.W.1, as "Sontay Laboratories."

RESIN COMPOUNDS, LTD. (P.C.).—Capital £7,500. Objects: To carry on the business of manufacturers of resinous and other compounds of every description, etc. Christopher H. Burn, White End, Latimer, Berks, director.

ADELE MAURICE, LTD. (P.C.).—Capital £500. Objects: To carry on business as manufacturers of and dealers in cosmetics, toilet requisites of all kinds, etc. Cyril W. Oxborrow, 58 Parkside Drive, Watford, director. R.O.: 13 Victoria Street, S.W.1.

M. O. LABORATORY, LTD. (P.C.).—Capital £500. Objects: To carry on the business of analysts, and to undertake all chemical, biochemical and physiological investigations and research work of any kind. Reginald Milton, B.Sc., 16 Lichfield Road, Northwood Hills, Mdx., director. R.O.: First Avenue House, High Holborn, W.C.1.

R. G. HARBOTT & Co., LTD. (P.C.).—Capital £2,000. Objects: To acquire the business of manufacturing chemists, etc., heretofore carried on by Reuben G. Rutter-Harbott and Arthur R. Cox at 242 Sebert Road, Forest Gate, E., as "R. G. Harbott & Co."

T. E. BUTLER, SON & Co., LTD. (P.C.).—Capital £3,000. Objects: To carry on the business of manufacturers of and dealers in health salts, fever and other powders, chemicals, drugs, toilet requisites and preparations, etc. Arthur H. Butler, 25 Ashleigh Road, Leicester, wholesale chemist, director. R.O.: 10 Carts Lane, Leicester.

BEECHAMS PILLS, LTD.—The lists for the issue of 2,400,000 deferred shares of 2s. 6d. each, and offered at 7s. 6d. each, opened at 9 a.m. on Wednesday, September 14, and closed one minute later. The issue was heavily over-subscribed.

PHARMACEUTICAL PRODUCTS, LTD.—Trading profits for year to March 31, after charging administration and other charges, £9,578 (against £9,050); add special credit from associated company £20,533, interest £864 (£1,030) and £8,543 brought in, making £39,518. To directors' fees, £500; to depreciation and loss on realisation of motor vehicles, etc., £56 (£145); to reserve for doubtful debts, £95 (£229); dividends on 6½ per cent. guaranteed redemption preference shares; forward, £30,742. Report states that amount of publicity expenditure to date is £91,740, which, according to arrangements referred to in previous reports, is carried forward in balance-sheet.

## Pharmaceutical Society of Northern Ireland

### Council Meeting

THE monthly meeting of the Council of the Pharmaceutical Society of Northern Ireland was held at 73 University Street, Belfast, on September 9, the president (Mr. S. H. Forrest) in the chair; there were also present Messrs. J. T. Nicholl, J. W. Gray, J.P., J. McGregor, C. Abernethy, J. McDowell, J. F. Grimes, J.P., S. S. Badger, J.P., J. Glendinning, J. Martin, S. Gibson, J.P., H. F. Moore, J. E. Connor, J.P., Dr. James Small and Sir Thomas McMullan.

#### CORRESPONDENCE

A letter was read from the secretary of the Fermanagh County Education Authority in reply to the Society's request for particulars regarding the costs of holding classes for pharmaceutical students. The Authority had asked for a grant from the Society. The letter stated that last year the number of students enrolled was nine, the fees being two guineas per student. The attendance grant from the Ministry of Education came to £13 4s., making the income £32 2s. Outgoings were: salary of teacher, £28 12s.; travelling expenses, £13; and hire of laboratory, £6 10s., totalling £48 2s. The loss was thus £16. A letter was received from Mr. Parker (a member of Council, who also wrote apologising for his absence from the meeting) asking that the same grant as last year, namely £7, should be given in order that the classes could be continued.

MR. KIRKPATRICK said if the students at Enniskillen were charged four guineas each, as they were at Magherafelt, the deficiency would be met.

It was decided, on the motion of MR. GLENDINNING, seconded by MR. NICHOLL, that a grant of £7 be made. PROFESSOR SMALL pointed out that this would cover the cost of the laboratory.

THE SECRETARY said he would point out that students in other parts were paying more. It was possible, of course, that there might not be the same number of students this year.

A letter was received from the Ministry of Home Affairs notifying that Mr. A. H. M. Irwin had been appointed to act as Registrar under the Pharmacy and Poisons Act, 1925, in place of Mr. T. S. Strahan.

The report of the Finance Committee was passed on the motion of MR. CONNOR, seconded by MR. GRAY.

#### EXAMINERS' REPORTS

The reports of the examiners at the last examinations of the Society were read by the secretary.

##### BOTANY, PART I

Reporting on botany, part I, Professor J. McLean Thompson wrote:—"The theoretical paper which was set for the June examination was drafted on broad lines, and was felt to offer a reasonable test of the ability of the students. The practical paper was on stereotyped lines, and was considered to offer no difficulty to any student who had really worked. It was clear from the theory papers that students who had worked properly had no difficulty in acquitting themselves well. On the other hand, they indicated that there were a number of students who came for examination ill prepared, and more or less on the chance that they might succeed in passing. I feel certain that if the theory paper had been a little more restricted in its range of questions, a number of border-line cases would have been rejected; but that this would not have affected unfavourably the good candidates.

##### PRACTICAL BOTANY

"It was on the practical examination that the contrast between good and bad students became more than clear, and this served to convince me more than ever that there were a number of candidates who come for examination without reasonable preparation. Nevertheless, I think that the standard of the examination was good on the whole, and that any leniency which may have been shown was justified. I am happy to report to you that the handwriting was much superior to that shown in the December examination, and that, as in other examinations, it was a rare thing to find good matter presented in a slovenly way. There were some excellent candidates who not only knew their work well but who could also present their statements in a very creditable manner. The majority of these candidates were presenting themselves for the first time. The few candidates who could be thought thoroughly unfit were among those who had already presented themselves."

##### SCIENCE

In his report on the science examination, Professor W. B. Morton stated:—"On both theoretical and practical sides the answering was better than in the previous examinations which I have conducted. Perhaps the questions set were more closely in accord with the lines along which the candidates had been taught. In any case I did not notice such marked gaps in their knowledge. The best answering was very good indeed. There were few doubtful cases; practically all who passed showed a quite satisfactory knowledge of the subject."



## CHEMISTRY, PART I

The examiner in chemistry, part I (Mr. J. E. Driver), wrote:—"The general standard was about the same as in the last two examinations. Some of the candidates did very well indeed, but attention must once again be drawn to the fact that a certain number of those entering were far below the standard necessary for a pass. In answering the theoretical paper many candidates seemed unable to utilise the results of their laboratory experience. For example, in question 1 a surprisingly large number gave incorrect descriptions of sulphuric acid; also question 2, which asked for examples of the use in the laboratory of oxidising and reducing agents, was not well done, and such common reagents as nitric acid, potassium permanganate, potassium dichromate and sulphur dioxide were seldom referred to. The answers to question 3, dealing with the oxides of nitrogen, were variable, some being very good and others poor. The physical differences between metals and non-metals (question 4) were well known, but little was said about the chemical differences. The answers to certain parts of question 8 indicated that little was known about the theory of electrolytic dissociation. The other questions were generally dealt with fairly satisfactorily. The practical work was good on the whole. The quantitative results were generally accurate and the qualitative analysis was also well done."

## CHEMISTRY, PART II

Mr. Driver continued:—"In Part II, as at the last examination, the proportion of candidates reaching a pass standard was higher than in Part I, chiefly owing to the absence of very weak candidates. The purely organic questions (section I of the theoretical paper) were well done, and the choice was fairly evenly distributed between them. In section 2, the most striking feature was the fact that question 5, dealing with common volumetric assay processes of the British Pharmacopoeia, was generally neglected, and such answers as were given were of poor quality. The term *pH* (question 6) seemed to be well understood, although some candidates had difficulty in giving three examples of the importance of *pH* determinations in connexion with Pharmacopoeial standards of purity. Question 7, dealing with impurities, was well done, and the answers to question 8 (on the preparation and properties of certain substances of pharmaceutical interest) were fairly satisfactory. The results of the practical examination were very satisfactory, the volumetric exercise being particularly well done. The purification of acetanilide was very well carried out by some, although differences in manipulative skill and experience were apparent."

## PHARMACEUTICS

On pharmaceuticals, Mr. Thomas Wilson wrote:—"Forensic Pharmacy.—The questions set in this subject were not exacting and most candidates showed satisfactory knowledge in the subject."

*Written Pharmacy.*—On the whole, the questions were not well answered. Some candidates did consistently well throughout, showing evidence of good training and thorough study. Others were consistently weak, and this weakness showed itself right through the paper. In the pharmacy section of the written paper seven questions were set, of which five must be attempted, thus giving the candidate a certain freedom of choice. For this reason some questions are set in what may be termed the more modern development of pharmaceutical practice. It was not in the latter type of question that the weakness mentioned was chiefly manifest. There was marked lack of knowledge of the fundamental principles of pharmacy as evidenced by the answers to question 3 dealing with steam distillation and question 6 on standardisation of galenicals, etc. A more thorough knowledge of the galenicals of the British Pharmacopoeia and their method of preparation is required. The examination revealed a serious degree of defective training in several of the candidates. I understand that some candidates enter for the examination after having attended evening classes only. It is evident from the scope of the syllabus that to overtake the subjects required at evening classes alone imposes a very heavy burden on the student who can only attend these classes when the day's work is done. As previously mentioned, an endeavour has been made to include in the examination paper the more modern developments of pharmaceutical science. The intention is not to make the examination more exacting; the standard of marks required in these questions was deliberately kept low. It was rather included in order to indicate to those responsible for teaching students the scope of the examination and the necessity for a thorough tuition first of all in the fundamental principles of pharmacy and then in all the newer applications of these principles.

*Practical Pharmacy.*—The practical work showed signs of improvement. Students are beginning to realise the standard of practical work required and the necessity for absolute accuracy in the dispensing of prescriptions and the making of galenical preparations. At the same time, the results leave much to be desired. More attention should be paid to labelling and finishing. Many preparations are left unwrapped and in not a few cases are not even labelled. The work set is carefully designed so that it could be done with ease in a pharmacy within a period of two hours. In the examination room allowance is made for the unfamiliar surroundings, and three hours are allowed. As practical pharmacy constitutes the main function of the pharmacist, candidates would do well to bear in mind that a high standard is called for."

## PHARMACOGNOSY

Reporting on pharmacognosy, Mr. T. E. Wallis stated:—"The

slight improvement noted at Christmas, 1937, has been maintained, but there is still room for a considerable further improvement. One cannot help feeling that some of the difficulty arises from the very large number of drugs which the students are required to study. This number might be limited by providing the teachers with some guidance as to the way in which the wording of the syllabus should be understood. For example, some of the extra-Pharmacopoeial drugs described in the British Pharmaceutical Codex are very rarely handled and might be omitted from the curriculum; this could be done by providing the teachers with a list of those drugs considered to be of importance, and the list could be accompanied by a statement that the examination would be limited to those drugs, so far as the Codex is concerned, and the examination in respect of these drugs would be confined to the knowledge of the biological (including the family) and geographical sources, the diagnostic characters ascertainable by a pocket lens and the active constituents."

THE SECRETARY said the reports would be printed and circulated to the schools.

## DISCUSSION

Before the reports were referred to the Education Committee THE PRESIDENT, on the motion of Mr. MCGREGOR, seconded by PROFESSOR SMALL, asked for the comments of members.

MR. BADGER said he thought the reports were very satisfactory except for practical pharmacy.

MR. MCGREGOR said the suggestion to cut down the number of drugs was a good one.

MR. CONNOR asked if the reduction in the number of drugs could also be applied in botany.

PROFESSOR SMALL: I do not think we could reasonably reduce the number of families unless you cut out something altogether.

MR. CONNOR said he was often struck by the amount of time taken up in reading things that were never encountered in after-life. The medical profession did not know how to write a prescription as it used to.

MR. GLENDINNING: A candidate ought to be asked now what preparations certain firms make.

MR. MCGREGOR: And the price of them.

THE PRESIDENT asked if Mr. Connor had had complaints from students regarding the botany course. MR. CONNOR replied that he could not say he had.

PROFESSOR SMALL: I think it is a very moderate syllabus. There are only ten lower plants.

THE PRESIDENT said he did not see how the list could be cut any finer than it was. Those who passed the botany course had to have only a very elementary knowledge. The comments on the training were referred to by MR. ABERNETHY.

PROFESSOR SMALL said if really good results were got from some students it could not be said that the teaching was at fault.

THE PRESIDENT said he disagreed with the mention in the report of night classes. He thought the night-class students were well taught.

THE SECRETARY: The night classes take longer at it. The others try to rush it.

## FINANCIAL REPORT AND ANNUAL MEETING

The financial report, presented by the treasurer (Mr. Moore), was adopted on the motion of Mr. BADGER, seconded by Mr. CONNOR, for submission to the annual meeting, which was fixed for three o'clock on October 3 at the Society's headquarters. The thanks of the Council to Mr. Moore were expressed by Mr. CONNOR. Mr. Nicholl and Mr. Tate were appointed to act as scrutineers in the event of a ballot.

## MEMBERSHIP

On the motion of Mr. MCGREGOR, seconded by Mr. GRAY, the following nominated candidates were elected members of the Society:—James Paul, Divernagh, Bessbrook, co. Armagh; James Frederick Lowry, 39 Belmont Church Road, Belfast; Leslie Howarth Breadon, School House, Fivemiletown, co. Tyrone.

THE SECRETARY stated that eleven licentiates had been invited to attend to receive their certificates. Seven had written saying that they were unable to do so, and it was a question whether it was worth while bringing successful students from a long distance on such occasions.

MR. MCGREGOR and MR. BADGER then gave notice of motion that the resolution on this subject should be rescinded.

THE PRESIDENT handed over certificates to Messrs. McAnallen, Boyle, Mullan and Smiley, and extended the best wishes of the Council. Mr. McAnallen was also presented with a special book prize for pharmacy. The successful students were afterwards entertained to tea.



# British Pharmaceutical Conference, 1938

## Chairman's Address

### THE PHARMACIST AND THE NATIONAL HEALTH SERVICE

**I**T is sixty-eight years since I began a five years' indentured apprenticeship under a pharmaceutical chemist. The Pharmacy Act of 1868 was just then coming into operation. There have been many changes and great advances since those days, and it has been my fortune to have been personally in very close contact with many important developments. We are at a moment when further important developments are in contemplation. In these circumstances I have thought I might be able to say something helpful by stating some of the points and suggestions that occur to me as the outcome of personal experience. I have made no attempt to be meticulously accurate as to dates or statistics, and my chronology may be imperfect. One leading thought has been in my mind. Recently there has been issued a most elaborate report on "Health Services in Scotland." This whole subject is presently very much in the public eye and is being keenly discussed by medical practitioners and by pharmacists. The whole field is being considered with a view to some reorganisation and consolidation. The thought that has occurred to me is expressed in the question—"What is to be the position of the pharmacist in any future scheme for a co-ordinated national health service?"

#### Significance of House of Lords Judgment, 1880

I take as a convenient starting point the decision of the House of Lords in the London and Provincial Supply Association case in 1880. From that standpoint I propose to glance sometimes backwards and sometimes forwards. In that case it was declared that the word "person" in Section 15 of the Pharmacy Act, 1868, did not include a body corporate, and therefore the whole restrictive purpose of the Act was apparently frustrated so far as controlling a body corporate was concerned. It is important to note that the poison sold was sold by a qualified pharmacist. This decision has often been spoken of as a disaster to the craft of pharmacy. I suggest that is not really the case. Prior to 1880 it had been too readily assumed that, provided the owner of a pharmacy was a duly qualified pharmacist, it did not matter whether the person actually conducting the business and dispensing and selling poisons was duly qualified.

The case and those that followed from it brought out clearly that in Section 15 of the Pharmacy Act, 1868, two principles are included, namely, ownership control by a duly qualified person and actual personal conducting or supervision of all dispensing and selling of poisons either by the qualified owner or a qualified employee of the owner. The latter principle was largely ignored, and by the judgment it was held that the former principle could not apply in the case of a body corporate, so that an important principle of the 1868 Act could be infringed with impunity. The case attracted much attention in Scotland, because under Scottish law an ordinary partnership is a legal *persona*, just as under English law a joint stock company is a legal *persona*. Had the judgment of

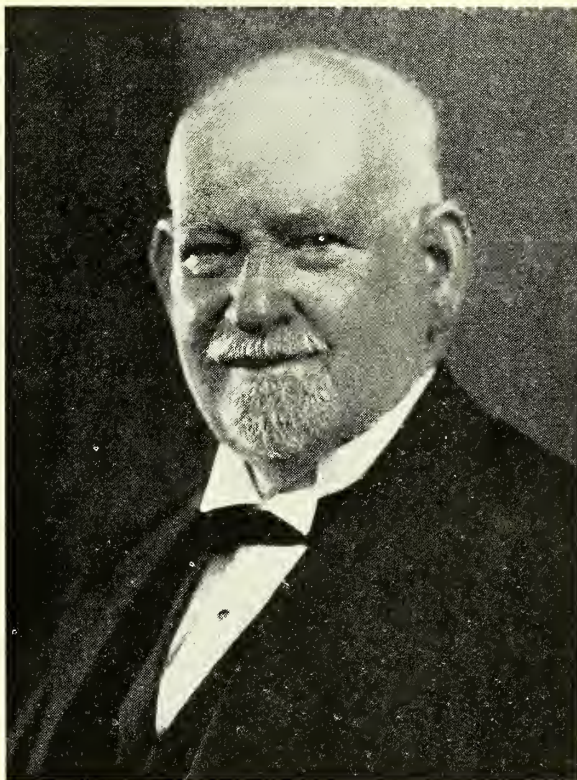
1880 been in favour of the Society's contention it would have meant that many well-known and long-established Scottish partnerships in pharmacy would have been liable to penalties for illegally carrying on the business of a chemist and druggist.

#### Principle of Qualified Ownership

In giving judgment, Lords Bramwell and Thesiger made important *obiter dicta* which suggested that while a corporation as a separate entity might not be liable to a penalty for unlawfully keeping open shop, individual members of the corporation might be liable. The Council of the Society had been advised that nothing was likely to be gained by further proceedings, but as a matter of fact these *dicta* were tried out by the Society in the Scottish Courts in the Leith Depot case in 1887. An eminent Scottish sheriff after *avizandum* in a careful written judgment, decided that the individual shareholders were liable to a penalty. But on appeal to the High Court of Justiciary, which is final, the Sheriff's judgment was reversed. Lord Young, a dominant member of the bench, practically decided the issue by saying that on a question of this kind it would be inadvisable that the Supreme Court in Scotland should differ from the judgment of the Supreme Court in England. Even if the decision had been otherwise it is most unlikely that it would have been of any advantage. It could be shown that from early times and during the currency of the Pharmacy Acts the business of a chemist and druggist had been carried on by associated capital, and so long as the actual dispensing and selling of poisons was done by a duly qualified pharmacist, or under his personal supervision, the safety of the public, it was held, was effectively secured. But the 1880 decision had the further effect of infringing the principle of qualified ownership and also, in the case of partnerships and companies, removed the restriction on the use of titles which indicate professional qualification. After a long controversy it was settled in the Poisons and Pharmacy Act of 1908 that a company, and in Scotland a partnership, could only carry on the business of a chemist and druggist and use the title chemist and druggist, or chemist, or druggist, or dispensing chemist, provided the business was conducted by a duly registered pharmacist who must be a partner of the firm, or a director of the company. This was the scheme devised to secure the principle of qualified ownership.

#### Restoration of Personal Titles

But the 1908 Act also restored the purely personal titles of pharmaceutical chemist, pharmacist and pharmacist to their position of exclusive reservation to individual persons who have passed the statutory qualifying examination. This long-drawn-out controversy from 1880 to 1908 was ultimately settled on terms formulated by the Society and accepted by Parliament.



MR. J. RUTHERFORD HILL, O.B.E., Ph.C.



# BRITISH PHARMACEUTICAL CONFERENCE 1938

It can hardly be denied that this apparently adverse decision of the House of Lords has had the effect of awakening pharmacists to the value of personal qualification and to a more strict observance of the real intention and requirements of the Pharmacy Acts. These are expressed as follows in the preamble to the Pharmacy Act, 1852: "It is expedient for the safety of the public that persons exercising the business or calling of pharmaceutical chemists should possess a competent practical knowledge of pharmaceutical and general chemistry and other branches of useful knowledge," and in the preamble to the Pharmacy Act, 1868, which again says: "It is expedient for the safety of the public that persons known as chemists and druggists should possess a competent practical knowledge of their business and should be duly registered on production of a statutory certificate of competent skill and knowledge and qualification." Originally, the qualifying examination comprehended the Latin language, botany, *materia medica* and pharmaceutical and general chemistry, with a proviso that other subjects could be added by by-law. The emphasis which the House of Lords decision placed on the qualification of the person actually conducting the business, whether as owner or employee, undoubtedly had the effect of giving an enhanced status to the person who qualified as a pharmacist and remained as an assistant or manager. The official Register thus came to include a much larger proportion of registered pharmacists who, though not in business on their own account, occupied responsible positions in the practice of pharmacy. This emphasis on the need for qualification has had its effect on the direction of similar qualification being deemed desirable in the dispensing and compounding of medicines in hospitals and public institutions.

## Pharmacy a Profession and State-protected

It has further brought out the fact that the practice of pharmacy is a profession quite apart from whether it be carried on in a shop by the owner of the business or in a public institution or in a manufacturing laboratory. Thus, the profession of pharmacy as represented by the Pharmaceutical Society comprehends pharmacists engaged in retail business, in hospitals, in the Army and Navy, in manufacturing laboratories, and in pharmaceutical training institutions. It is true many pharmacists are engaged in trade, but it is important to remember that the practice of pharmacy is a profession, no matter in what position or capacity it may be exercised. This wider conception of the practice of pharmacy was really the ideal animating the persons who established the Pharmaceutical Society in 1841. That was nearly a hundred years ago, and we are still only in process of seeking its adequate realisation. This distinctly professional aspect is clearly indicated in the Royal Charter of 1843 in the words: "Our loving subjects have associated together and have formed themselves into an Association called the Pharmaceutical Society of Great Britain for the purpose of advancing chemistry and pharmacy and promoting a uniform system of education of those who should practise the same," and, the Charter goes on to say, for their protection in practice as qualified pharmacists.

In the Charter and in the Acts of 1852 and 1868 the Crown and Parliament declare that the privileged position is granted because "it is expedient for the safety of the public." That is the only basis on which pharmacists can make any claim to special recognition and protection. It is the practice of pharmacy, including as it has specially done since 1868 the dispensing and retail distribution of certain scheduled poisons, that is reserved and protected. It is in no sense a close corporation or a selfish monopoly. Any person or body corporate is at liberty to engage in the practice of pharmacy by complying with the regulations imposed by Parliament in the interests of public safety. This recognition and protection of the duly qualified individual has been emphasised and made more manifest, and from that point of view the House of Lords decision of 1880 was not a loss but a distinct gain to the profession of pharmacy. It was unfortunate that the provisions of the Pharmacy Act, 1868, were limited to the dispensing and distribution of certain scheduled poisons, because in this way the regulation and the restriction of the practice of pharmacy in the dispensing of all medicines, which was the sole purpose of the Pharmacy Act, 1852, was in no way advanced. The Pharmacy Act, 1868, had the further disadvantage that the practice of pharmacy got so entangled with the handling of poisons as to be pushed aside, and thus

real progress was impeded. But the 1868 Act had this importance—that it embodied in British legislation the important principle that "the education of the vendor is the only safe foundation for a Poison Bill." The wider application of that principle so as to entrust the handling of potent medicinal substances and the dispensing of all prescriptions to duly qualified pharmacists, the original policy of 1841 and 1852, remains as yet only partially accomplished. Our Irish brethren in their Pharmacy Act, 1875, warned by our failure, were more successful and secured that it should be unlawful for any person, other than a registered pharmacist, to sell, dispense or compound any medical prescription whether it contained a poison or not.

## Sale of Poisons by Non-pharmacists

The Poisons and Pharmacy Act, 1908, which settled the controversy regarding what has been called "company pharmacy," introduced another new element. Largely through a misunderstanding it had been generally assumed that farmers and horticulturists had difficulty in procuring preparations of arsenic and tobacco for use as insecticides, fungicides, bactericides, or as sheepwash. Parliamentary agitation at the instance of manufacturers led to an infringement of the foundation principle of the previous poison legislation that limitation of the retail distribution of poisons to the educated pharmacist was the only really effective way of securing public safety. The 1908 Act gave permission to certain licensed persons other than pharmacists to distribute arsenical and tobacco preparations to the public in sealed packages. This was the thin end of the wedge which has been driven a little deeper by the Pharmacy and Poisons Act, 1933. I say a little deeper, for by glancing at Part II of the Poisons List of 1933 it will be seen that a very limited number, and these mostly substances used in agriculture and horticulture, or for technical, domestic or sanitary purposes, are included for sale by other than qualified pharmacists. At the instance of the Society the Departmental Committee on Poisons adopted the proviso that articles used for the medical treatment of human ailments should be distributed only by qualified pharmacists and, with the possible exception of lysol, this has been adhered to by the Poisons Board. It has to be recognised that the greatly extended use of many poisons for technical, domestic and sanitary purposes, as well as in agriculture and horticulture in recent years, has altered the situation as it was in 1868 and some relaxation was naturally to be expected. In any case, we do not want any monopoly in the sale of poisons except where the public interest and public safety are shown to require limitation of distribution to specially qualified persons. Any suggestion of a selfish monopoly on the part of the pharmacist is further entirely removed by the new statutory scheme by which the scheduling of poisons and the regulating of their distribution are carried out, not as formerly by the Council of the Pharmaceutical Society, but by the Home Office on the advice of a thoroughly representative Poisons Board appointed by the Government. The definition and recognition of the proper sphere of the pharmacist are indicated by the relatively large representation accorded to him on the Poisons Board.

## N.H.I. Pharmaceutical Service

Another event which has had a profound and, on the whole, satisfactory influence on the practice of pharmacy is the National Health Insurance Act of 1911. I remember sitting in the House of Commons hearing Mr. Lloyd George introducing his Bill when he declared with reasons and with unmistakable clearness, "We have resolved that in this matter we shall adopt the practice common in Scotland according to which the medical practitioner shall prescribe and the pharmacist shall dispense the medicine." This was to apply to all prescriptions and not merely to those containing poisons, and it was also laid down that Insurance Committees should make arrangements for the supply of medicines only with chemists and not with medical practitioners except where no pharmacist was available. Thus, for the first time in British pharmacy, under the National Health Insurance scheme the dispensing of all prescriptions is limited to duly qualified pharmacists, as has been the case for all medical prescriptions in Ireland since 1875. A similar extension to all medical prescriptions would be the attainment of the objective aimed



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at by the founders of the Pharmaceutical Society in 1841. This complete separation of the prescribing from the dispensing of medicines was strongly emphasised by Dr. J. F. Tocher in his presidential address at the Newcastle meeting of the Conference in 1909, when he said: "The dispenser should not sign the death certificate." There can be no doubt this approach to the ideal position which we have long been familiar with in Edinburgh is a distinct and desirable advance. While it gets rid of the undesirable dispensing doctor, it gets rid also of the equally undesirable prescribing chemist. And this is one of the salutary consequences of the National Health Insurance scheme. Another valuable outcome of the National Health Insurance scheme on the lines indicated by Mr. Lloyd George has been the bringing together in happy co-operation of the medical profession and the pharmaceutical profession. The distinctive functions of each profession have been more generously recognised so that the active co-operation of the two departments of the healing art has been more and more realised to the mutual professional advantage of both and also to that of the community whom both are called upon to serve in loyal collaboration. The really professional qualifications of the pharmacist have also become more adequately realised by intimate contact with representatives of public authorities and approved societies. Every Insurance Committee now includes at least one pharmacist, and in the Medical Services Subcommittee and the Pharmaceutical Committee work of the Insurance Committee the value of the pharmacist and his professional qualification have become better known and appreciated. In the Drug Accounts Committee, which controls the Central Checking Bureau, he also has greater opportunities of becoming known and appreciated. In this connexion he has proved his value as a factor in the national health service. There can be no doubt that in this respect the National Health Insurance scheme has been a benefit to pharmacy and has given the individual pharmacist an enhanced status. This has enabled the pharmacist to secure an extension of a similar scheme to pharmaceutical service in connexion with public assistance under the local authorities. It has been successfully applied also to public medical service schemes established by the British Medical Association.

## University Degree in Pharmacy

Thirty-six years ago Dr. J. F. Tocher, with whom I had the honour of being closely associated, proposed an approach to the Scottish Universities with a view to securing facilities for the University training of pharmaceutical students and the institution of a science degree open only to pharmacists. The scheme was unanimously approved by the Council of the Society and, through the assistance of Professor Bower, a member of the Senatus of Glasgow University, the scheme was adopted by that University. But it remained untaken advantage of by reason of the Society having no recognised compulsory scheme of pharmaceutical education. Such a curriculum had long been felt to be necessary and was often spoken of. But it required the upheaval of the after-war conditions and the Government training grants for ex-service men to furnish the opportunity for setting up a definite, compulsory curriculum. So soon as this had been accomplished on a standard which the University could recognise, the scheme began to operate and similar opportunity for a University degree has since become available in the London and other Universities. There can be no doubt at all that the institution of a definite academic curriculum and a University degree for pharmacists has very materially added to the dignity and professional status and to the definition and recognition of the appropriate function and sphere of the pharmacist.

## The Pharmacist and Official Standards

Another important step in the clearer definition and more adequate recognition of the sphere of the pharmacist is in connexion with the important work of preparing and publishing the British Pharmacopoeia. During all the years pharmacists had given much help in the compiling and periodical revision of the British Pharmacopoeia, but this work did not always receive the consideration due to it, nor was its practical value recognised and the results adequately embodied in the revised Pharmacopoeia. After considerable negotiations it was made clear that the practising pharmacist could properly, under the

Medical Acts, have a direct voice in Pharmacopoeia compilation and revision. In 1928 this resulted in the setting up of the British Pharmacopoeia Commission, which included three pharmacists, with Dr. C. H. Hampshire as secretary. The result is the sixth British Pharmacopoeia in 1932, which is a very great improvement on any previous Pharmacopoeia. This a further very distinct advance in the definition and recognition of the proper sphere of the pharmacist and a valuable indication of the modern tendency for closer co-operation between the medical and pharmaceutical professions. One of the activities of the British Pharmaceutical Conference which ultimately led to an important development was the publication of a Formulary of recently introduced medicaments and other preparations in common demand, for which a recognised standard was required. The Extra Pharmacopoeia originated by Mr. Martindale to some extent met the new demand. But something more comprehensive, after the manner of Gray's Supplement to the Pharmacopoeia, was felt to be necessary. Suggestions were made by the late Mr. J. T. Humphrey that the B.P.C. Formulary might be made the basis under the now familiar name British Pharmaceutical Codex, and that it should be issued by the Pharmaceutical Society. Thus it comes about that the British Pharmacopoeia, under the able supervision of a pharmacist, and the British Pharmaceutical Codex, under the direction of Mr. Skinner and the able editorship of another pharmacist, Mr. C. E. Corfield, are recognised by the Government and on all hands to-day as the authoritative compendia of British medicines, the latter also including medical and surgical appliances. The production of these two books means the close co-operation of the medical and pharmaceutical professions and helps to define the position and functions of the pharmacist.

## Pharmacists in Hospital and Public Health Services

On the Advisory Committee on Medical and Allied Services of the Department of Health for Scotland, on which I had the honour to serve, followed by Mr. Guthrie our president and Dr. Tait, the question of organising hospital services was discussed, and three times over in their reports the Committee unanimously recommended that in all hospitals where pharmaceutical service was rendered, the staff should include a duly qualified pharmacist to whom should be entrusted all pharmaceutical work. When the Local Government (Scotland) Act, 1929, was passed, the Executive of the North British Branch submitted to the Scottish Department of Health and to all local authorities in Scotland a Memorandum pointing out that in all schemes of health services mention was made of medical practitioners, nurses, midwives, dentists and opticians, but never a reference to a pharmacist as a necessary unit in such health services. It was also pointed out that in the Pharmacy Acts the State recognises that in the public interest in a well-ordered State the duly qualified pharmacist is a necessary individual who has an essential function to discharge in the body politic. Those who have responded to the call of the State by complying with the requirements and acquiring the statutory certificate of skill and knowledge and experience requisite for the practice of pharmacy are reasonably entitled to ask the State to reserve to them the carrying out of the public service they have qualified themselves to render. They are also entitled to ask that such service should be sufficiently remunerated to justify the expenditure of the time and money necessary to acquire the qualification. Just as the State, in the public interest, limits the practice of medicine to duly qualified medical practitioners, so also should the State limit the practice of pharmacy to duly qualified pharmacists. It was also pointed out how experience had clearly demonstrated the many useful functions yielded by the National Health Insurance Central Pricing and Checking Bureau in the way of supervision and control of medical services and in obtaining of statistical information as to frequency of sickness, the nature of the sickness, the incidence and effects of epidemics, the use of particular drugs and remedies and many other matters of value in public health services. For these reasons it was urged that any readjustment or extension of public health services should be on the lines indicated and in accordance with the general scheme of National Health Insurance Medical Benefit. The Department of Health replied that so far as their influence or advice was effective, they would keep in mind and act upon the recommendations in the Memorandum. Similar evidence was submitted to the Committee on Health Services in Scotland,



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appointed by the Secretary for Scotland in 1933, which presented a most comprehensive Report in 1936, which states:

"The existing arrangements under the National Health Insurance schemes should be applied to the proposed extension of general-practitioner services to the dependants of insured persons and others. For other services we think that local authorities should be free to make their own arrangements. It would be an advantage, however, if the present insurance machinery for the supplying and pricing of drugs were used as widely as possible by local authorities in other fields. We endorse the view, submitted in evidence, that, except in rural areas where the doctor requires to do his own dispensing, the services of fully qualified pharmacists should be used in the dispensing of drugs."

A recent circumstance has brought out in a new way the position and function of the pharmacist in the community. In connexion with the Air Raid Precautions scheme it has been considered officially that the pharmacist can be of most public service by remaining in his pharmacy with a stock of medicines and medical and surgical appliances that may be required to meet an emergency. But it is proposed that he should have a special course of instruction as his chemical and pharmaceutical knowledge gives him a special qualification to deal with the detection and identification of poison gases and the process of decontamination, and the articles required for such work.

## The Pharmacist in the New Era

Another event which may be called an epoch-making incident was the challenge thrown out at the Conference meeting in Bath in 1924. Mr. Edmund White, an accomplished pharmacist, who rather prided himself on following the model of Michael Carteighe, an able leader and pioneer in pharmaceutical progress of the previous generation, was chairman. In his opening address he indicated how the *materia medica* had in recent years been enriched by the great advances in scientific medicine and surgery. The researches on the relationship between chemical constitution and physiological action had resulted in the introduction of many synthetic substances, and organotherapy and the use of vaccines and sera and the extended use of medicaments by the parenteral method had created an entirely new situation. This newer *materia medica*, he pointed out, created a sort of "no man's land" between medicine and pharmacy, and there was no class of person specially equipped for dealing with this particular territory. His challenging question was: "Will pharmacy elect to endeavour to undertake this new work or will it be left to others to do—perhaps someone with a new qualification?" His challenge made a deep impression, and it was realised that steps must be taken to put matters in order so that the pharmacist should by education and examination prove himself to be the man who can most readily adapt himself to the changed conditions and most readily undertake the new work with the greatest possible chance of success for the public and the professions. He instanced the setting up in 1919 by the Ministry of Health of a "Consultative Council on Medical and Allied Services" to advise what steps should be taken to organise medical treatment for the benefit of the whole community, and to consider how the training and qualification of the pharmacist could best be fitted into the scheme so as to give the greatest possible scope to his services and render the scheme most effectual in operation, and allocating to the pharmacist certain laboratory functions. The Therapeutic Substances Act, 1925, was a further development in the same direction, and Mr. White ended by saying: "To me the possibilities for pharmacy are evident and an effort should be made to keep in line with the requirements of the present day, and, no less, the future." Mr. White's challenge was accepted, and one of its earliest effects was the setting up of the Society's pharmacological Laboratories at Bloomsbury Square in 1926, and following that, the publication of the "Quarterly Journal of Pharmacy and Pharmacology" under the able editorship of Dr. C. H. Hampshire. The latter publication reveals the value of the pharmacist as a collaborator in pharmacological research and in general research work in institutions and in pharmaceutical manufacturing laboratories.

As further evidence of the Society's endeavour to adapt the equipment of the pharmacist to meet modern conditions we have the readjustment of the pharmaceutical curriculum and the requirements of the Qualifying examinations. These in-

clude the raising of the general knowledge examination to University Entrance standard, the imposing of specific conditions of training in the apprenticeship period, and an extended examination syllabus to include biology (botany and zoology), chemistry, physics, pharmaceutical chemistry, pharmacognosy, pharmaceuticals (including bacteriology in relation to sterile solutions, vaccines and the performance of sterility tests) and forensic pharmacy. With such a general-knowledge educational standard, a period of regulated practical training and an academic curriculum tested by a thorough qualifying examination, it is surely clear that pharmacy can claim to be a profession. It is this professional status and the rightful recognition and protection of those qualified to practise pharmacy that is the real object aimed at in the words of the Royal Charter: "The protection of those who carry on the business of Chemists and Druggists." The language of the Charter is rather suggestive of a trader keeping open shop and of the protection of a trading interest. But the language requires a much wider interpretation in these modern times. What needs recognition and protection is the practice of pharmacy whether in a retail pharmacy or in a hospital, or institution, or in a manufacturing laboratory, or in a training institution or in the Army, the Navy, or the Mercantile Marine. I have not attempted to formulate a specific definition of what the Charter means by the phrase "the business of a Chemist and Druggist." That important work I feel is better left in the hands of the Council's committee of inquiry. But I have, I think, furnished material that may help in fixing an adequate definition.

## Free Choice of Pharmacist and Doctor

The whole question of an adequate and thoroughly efficient National Health service is at present a very live question, and pharmacy has a right to be heard and duly provided for as playing an essential part in any such scheme. The movement, like many other things, seems to tend in the direction of nationalisation and many medical men seem to fear it is tending too much towards what they call "institutionalisation." There are two important features in the National Health Insurance scheme which every endeavour should be made to conserve. I refer to free choice of doctor and free choice of chemist. The value of having the family doctor who knows the family history, and who enjoys the confidence of his patient, is a very valuable asset. But much the same may be said of the family chemist. He gets to know his clients and they get to know him in a way that psychologically aids the medical treatment. Moreover, the pharmacist, like the doctor, comes to know confidentially much personal and family history which the patient does not wish to communicate to any doctor or chemist to whom, without any choice, he may be assigned, and he may have one doctor one day and another the next, and the same with the chemist. To accomplish this in a National Health scheme may be difficult but it is an ideal to be steadily aimed at. The National Health Insurance scheme brings into valuable co-operation four parties—(1) Parliament, as represented in the Department of Health; (2) the Insurance Committee, a local body representing the insured community; (3) the Medical Committee; and (4) the Pharmaceutical Committee. These four parties should constitute the basis of any national health service and should co-operate in carrying out both domiciliary and institutional treatment. I have already noted the constant tendency to omit the latter class in schemes of medical service. It must be remembered, however, that you may have a perfectly correct diagnosis and an entirely appropriate prescription by the medical practitioner, but if there is any failure on the part of the dispenser the whole purpose of the medical practitioner may be frustrated, with serious consequences to the patient. It is therefore essential to have a thoroughly organised and competent pharmaceutical service, and this must never be lost sight of.

## The Present Problem in Pharmacy

You will remember that the Society submitted to the Departmental Committee on Poisons, which resulted in the Pharmacy and Poisons Act, 1933, a very full and cogent case for legislative enactments designed to secure, in the public interest, the ideal rights of pharmacy which animated the founders of the Pharmaceutical Society in 1841. Unfor-



unately, owing to the restricted terms of reference, these could not be dealt with. It was freely admitted, however, that there was a reasonable and well-founded case, though it must be left over to be dealt with under wider terms of reference. That is the problem facing British pharmacists to-day. There are four things I venture to mention as essential conditions for any satisfactory legislation, namely, (1) a sufficient definition of what is comprehended in the expression "the practice of pharmacy"; (2) a statutory recognition of that definition; (3) an effective reservation and protection of the practice of pharmacy; and (4) a reasonable remuneration for the services rendered to the nation by the pharmacist. I am an optimist and though in these days of curative or preventive medicine and physical and mental fitness movements the practice of medicine and pharmacy may undergo changes, there will always be a field for the pharmacist, and an increasing demand on his co-operation as an essential member of the healing art. But to succeed he must make himself worthy by honest hard work, and the profession must loyally stand shoulder to shoulder in the common endeavour to reach the desired goal. I will close by quoting some words by an out-

standing personality with whom I am now free to confess to have been in close personal association long before his brilliant star emerged in the pharmaceutical firmament. I refer to Sir William Glyn Jones, who in a memorable address to the North London Chemists' Association in 1926 said:—

"The immediate future is fraught with issues to pharmacists and prospects of opportunities and dangers. Whatever else happens, pharmacists must continue, in regard to them, to speak with one voice. The forces of pharmacy must be brought and kept under one united command. I do not mean by that a Napoleon, or a committee of Napoleons. In preparation of the plan of campaign to the views of all must be given due weight, but the final responsibility for the devising of that plan and the guiding of the operations for giving effect to it must be controlled from one source and by one organisation. I appeal for loyalty, and above all, for the sinking of every personal consideration in that union of purpose, counsel and activity which will make the calling that is ours worthy of being the life-work of the men who are at present engaged in it, and of those who will in future be entering its ranks."

## Skin Bleach Products

CONVENTION and fashion, which permit sun-tan during the holiday period, do not allow it to fade gradually at the approach of autumn and winter. Consequently the chemist is often called upon to supply preparations for removing or disguising this pigmentation of the skin. Many preparations have been suggested and used by cosmetic specialists; such products often go by the name of "freckle removers," "bleach lotions" and the like.

Removal of the pigmentations with a bleach may only be temporary, but the psychological effect on the sensitive user is nevertheless considerable. The pigment of the skin lies within the line of division between the dermis and epidermis. It has a protective action, varies in amount and is not evenly distributed. A curious fact is that the untanned skin of a white person fluoresces under the influence of filtered ultra-violet rays, whereas the sunburned skin of a white person shows, under similar treatment, no such result. Freckle pigment—in permanent freckles—is an accumulation at about the level of the basal layer of skin epidermis. Bleaches lighten the skin but generally have an action only upon surface pigmentation rather than upon the actual pigment corpuscles themselves. Preparations such as the heavy powder-creams have been used for disguising the tan of the skin. These are not strictly bleaches but simply products with a good covering power. Titanium dioxide or zinc oxide is often used for the purpose.

### Preparations

Many substances have been used to remove or lighten skin pigmentation. Some are surface irritants and lead to a removal of the epithelial corneum, but these are far from ideal. Such are salicylic acid and formalin, which appear to be rather drastic for the purpose. Of other types lemon juice is frequently used, and if popularity is any guide, this would appear to be successful. The majority of users, however, rely upon the bleaching action of fresh oxygen liberated from peroxides and perborates. Hydrogen peroxide is a favourite, but it is essential that the strength should not have deteriorated. This can now be guarded against by the use of stabilisers.

The following old formula for a freckle lotion may be of interest:—

Angelica root .. .. .	1.75 oz.
Black hellebore root .. .. .	1.75 oz.
Storax .. .. .	0.75 oz.
Oil of bergamot .. .. .	150 grs.
Oil of citron (lemon) .. .. .	150 grs.
Alcohol .. .. .	4 pints

The directions are to macerate for one week and filter. A modern writer recommends the following formulas:—

#### Freckle Cream

Hydrogen peroxide solution .. .. .	24
Glycerin .. .. .	24
Anhydrous lanolin .. .. .	to 100

Emulsify mechanically.

#### Skin Bleach

Magnesium peroxide .. .. .	50
Talc .. .. .	32
Zinc oxide .. .. .	to 100

Mix intimately and make into a paste with water before use.

Acetic acid and lemon juice are used together in the following formula:—

#### Bleach Lotion

I	
Dilute acetic acid .. .. .	4
Alcohol .. .. .	6
Fresh lemon juice .. .. .	16
Water .. .. .	to 100

Mix, stand for twenty-four hours and filter.

Two formulas incorporating hydrogen peroxide, both capable of some modification, are:—

#### Bleach Lotion

II	
Hydrogen peroxide, 20 vols. .. .. .	50
Rose water .. .. .	50

Care should be taken to see that the peroxide is of good quality.

#### Bleach Lotion

III	
Hydrogen peroxide, 10 vols. .. .. .	100
Simple tincture of benzoin .. .. .	8
Perfume .. .. .	q.s.
Rose water .. .. .	to 1000

The same remark applies to this product as to the last. Non-greasy bleach creams may be prepared with a vanishing cream base (stearic acid, potassium hydroxide, etc.) with the incorporation of a peroxide:—

#### Bleach Cream

Zinc peroxide .. .. .	8
Titanium dioxide .. .. .	2
Talc .. .. .	24
Vanishing cream base .. .. .	120

Although zinc peroxide is indicated in the formula, it is problematical whether this is so safe as the corresponding magnesium body. It will be noted also that the last combines bleaching action with covering power.

Ammonium chloride has been suggested as the principal agent in preparations for the removal of freckles, which are often the cause of much anxious mirror-gazing by adolescent girls.

#### Freckle Application

Ammonium chloride .. .. .	10
Glycerin .. .. .	35
Alcohol .. .. .	105
Rose water .. .. .	to 1000

Perfume as desired, but not too heavily.

All the formulas given are easily prepared and, provided thorough initial tests are carried out, there is no reason why a suitable product should not be made and packed in the pharmacy.



## Trade Notes

BENGUE & Co. announce a reduction in the price of Dr. Bengue balsam elsewhere in this issue.

HOWARDS' LACTATES are advertised in this issue. Samples and prices may be obtained from Howards & Sons, Ltd., Ilford.

CHEMIST'S OWN BRAND.—The selling and advertising scheme introduced by Arthur H. Cox & Co., Ltd., Brighton, 7, is advertised in this issue, and readers are invited to write for full details.

A HANDSOME GLASS COUNTER is illustrated and described elsewhere in this issue by Dudley & Co., Ltd., 451 Holloway Road, London, N.7, who are actual makers. An 84-page catalogue will be sent on request.

GAJETTY BEAUTY PREPARATIONS.—H. & H. Trading Agencies, Ltd., 131-134 New Bond Street, London, W., have acquired control and distribution of Gajetty beauty preparations. Terms may be obtained on application.

NEW HAIR BEAUTY OUTFIT.—Chemists are invited to display and sell Nestlé's Colorinse hair beauty outfit which is offered at a popular price by C. Nestlé & Co., Ltd., 465-467 Holloway Road, London, N.7, from whom supplies may be obtained, or orders may be placed with the usual wholesalers.

THE CHEMISTS' EXHIBITION is again being held at The Royal Albert Hall, London, S.W.7, from September 19-23. For particulars of rebates on railway fares to chemists in business, also for tickets of admission, application should be made to British & Colonial Druggist, Ltd., 194-200 Bishopsgate, London, E.C.2.

MANESTY AUTOMATIC WATER STILL.—A range of some of the Manesty automatic water stills, with capacities varying from three pints to fifty gallons per hour, using gas, steam, electricity or paraffin, is illustrated elsewhere in this issue by the Manesty Machines, Ltd., 5 Speke Hall Road, Liverpool, 19, who invite inquiries.

MAC ANTISEPTIC SWEETS.—Macleans, Ltd., Great West Road, Brentford, Middlesex, direct attention to Mac antiseptic throat sweets which have now been in active demand during the past three years. Forceful national advertising is promised, and there is a bonus offer, details of which are given in our advertisement pages.

CROOKES' HALIBUT-LIVER OIL.—An appealing new showcard published in twelve colours has been produced by the Crookes Laboratories, Park Royal, London, N.W.10, as a sales aid for Crookes' halibut-liver oil. This card is illustrated in our advertisement pages, and a specimen will be sent on application, together with details of an attractive bonus scheme.

PARFUMERIE BOURJOIS have issued a new stand to accommodate the three sizes of Evening-in-Paris perfume, which was recently reduced in price. This perfume is extensively advertised, and the stand should be an effective means of further sales.—A serial play is being broadcast from Radio Lyons as an advertisement for Bourjois products, and this advertising campaign is supported by intensive Press advertising.

DIAMOND JUBILEE.—Haller & Phillips, Ltd., chemical merchants, London, are celebrating during this month (September) their diamond jubilee, the business having been founded in 1878 as Geo. Haller & Co. by Mr. J. G. Haller, chairman of the company. The managing director is Mr. G. W. Phillips, who has been associated with the business for many years.

HALIBUT-LIVER OIL and other vitamin products are advertised in this issue by H. R. Napp, Ltd., 3 and 4 Clement's Inn, London, W.C.2.

ILLUSTRATED on this page is a specimen of the new cut-out for Vinolia soap, which displays actual cartons. This display piece is intended for use as a centrepiece, and it may be obtained on application to Vinolia Co., Ltd., Bebington.

NON-POISONOUS DISINFECTANT.—Thornton & Ross, Ltd., Linthwaite, Huddersfield, have introduced a non-poisonous disinfectant fluid under the trade name Peractum. This fluid is described as the ideal antiseptic for the disinfection of wounds, etc., and for personal hygiene. It has a Rideal-Walker co-efficient of five times the strength of phenol. Each bottle is packed in a carton, and full details are given on the label as to how it should be used.



STICK LIQUORICE JUICE is offered by Macandrews & Forbes, Ltd., Bush House, London, W.C.2, under the trade name Apollo. This stick is made from the concentrated extract of rich liquorice root and is guaranteed free from adulteration. There are four sizes. Supplies may be obtained from the usual wholesale houses, but in cases of difficulty application may be made direct.

PUBLICITY FOR REXALL PHARMACISTS.—Elsewhere in this issue appear specimen announcements specially prepared for use by individual Rexall chemists in their local newspapers as six-inch single-column advertisements or as leaflets, wrappers, etc. The wording is by Mr. Martin L. Daniels. Rexall chemists are invited to write to the United Drug Co., Ltd., Nottingham, for further information.

PHOTOGRAPHIC DEMONSTRATIONS.—Johnson & Sons (Manufacturing Chemists), Ltd., Hendon, London, N.W.4, have prepared a number of lecture-demonstrations which they are offering to local photographic societies. These are of a practical nature and the company send material and data to enable one of the members to give an interesting as well as instructive evening. Details of the lectures can be obtained on request.

NEW TABLOID EMPIRIN PRODUCT.—Burroughs Wellcome & Co., Snowhill Buildings, London, E.C., have now issued "Tabloid" "Empirin" Compound with Codeine, formula for which is: "Empirin" acid, acetylsalicyl., gr. 3½; phenacetin, gr. 2½; caffeine, gr. ½; codeine phosph., gr. ¼. Being outside the scope of the Dangerous Drugs Acts, it may be sold by pharmacists without restriction. The product is issued in bottles of 25 and 100.

M. & B. 693.—Pharmaceutical Specialities (May & Baker), Ltd., Dagenham, Essex, inform us that they are now in a position to make M. & B. 693 generally available to the medical profession for treatment of pneumococcal infections. This product will be marketed in containers of 25 and 100 0.5 gram tablets. A descriptive pamphlet will shortly be available. Inquiries relating to the use of this product should be directed to the medical department.

SERVICE FOR CHEMISTS.—The British distributors for Lederle Laboratories, Inc., New York, are offering free on application to chemists' assistants and apprentices their monthly bulletins of the Lederle Laboratories. The object of these bulletins is to correlate current clinical experience with laboratory research, and these will be of particular service in keeping pharmacists abreast with medical progress. Applications should be made to Chas. F. Thackray, Ltd., The Old Medical School, Leeds. Further details of the scheme are given in our advertisement pages.



## Trade-Mark Applications

The figures in parentheses refer to the classes in which the marks are grouped. A list of classes and particulars as to registration are given in "The Chemist and Druggist Diary and Year-Book," 1938, p. 302.

(From "The Trade Marks Journal," August 31, 1938)

- "DISULPHAN"; for agricultural, veterinary, sanitary and medicinal chemicals, etc. (2) (3). By May & Baker, Ltd., 42 St. Paul's Churchyard, London, E.C.4. 584,092/3. (Associated.)
- "NOBIO"; for disinfectant and toilet soap (2) (48). By Lever Bros., Ltd., Port Sunlight, Cheshire. 585,512/3. (Associated.)
- "LORICIDE"; for agricultural, veterinary and sanitary chemicals, etc. (2). By British Dyestuffs Corporation, Ltd., Imperial Chemical House, Millbank, London, S.W.1. 586,287.
- "IDO"; for medicinal chemicals (3). By Aktieselskabet Ferrosan, 72 Blegdamsvej, Copenhagen, Denmark. 581,911.
- "RIVAL"; for medicated sweetmeats (3). By Fryer & Co. (Nelson), Ltd., Chapel Street, Nelson, Lancs. 582,500. (Associated.)
- Plant design; for medicinal chemicals (3). By Homoia, Lameystrasse 26, Karlsruhe, Germany. 584,801.
- "CODRENTUM"; for ointments containing cod-liver oil (3). By Allen & Hanburys, Ltd., 37 Lombard Street, London, E.C.3. 586,650. (Associated.)
- "NEUNELLA"; for medicinal chemicals and perfumery (3) (48). By Varnella, Ltd., 30 Highgate Road, London, N.W.5. 586,772/3. (Associated.)
- "GEMLECTRIC"; for electric shaving machines and parts thereof (6). By Ever Ready Razor Products, Ltd., The Hyde, London, N.W.9. 580,125. (Associated.)
- "ALCAZAR"; for shaving machines (6). By A. & H. Bassat (London), Ltd., 52 Rosebery Avenue, London, E.C.1. 585,728. (Associated.)
- "BINOC"; for thermometers, clinical and not clinical (8) (11). By Short & Mason, Ltd., Aneroid Works, MacDonald Road, London, E.17. 587,106/7. (Associated.)
- "EMBASSY"; for razors and razor blades (12). By Rolls Razor, Ltd., 255 Cricklewood Broadway, London, N.W.2. 586,776.
- "TOP & TAIL"; for perfumes and toilet powder (48). By Edward Hack, 73 High Holborn, London, W.C.1. 585,434.
- "BUTILITY"; for perfumed soap (48). By Pure Products, Ltd., Colwick, near Nottingham. 586,708.
- "OLDLANDS "THOR" BRAND with picture of Thor ("Oldlands" disclaimed); for perfumery (48). By R. W. Oldland, 131 Broadway, Thorpe Bay, Essex. 586,169. (Associated.)
- "RAYRADE"; for all goods (48). By R. Hovenden & Sons, Ltd., 29 Berners Street, London, W.1. 586,936.

(From "The Trade Marks Journal," September 7, 1938)

- "H E B"; for photographic chemicals, etc. (1). By J. Halden & Co., Ltd., Rowsley Grove, Reddish, Lancs. 587,084.
- "SQUIBB" with seal design; for agricultural, veterinary, medicinal chemicals, etc., and perfumery (2) (3) (48). By E. R. Squibb & Sons, 745 Fifth Avenue, New York, U.S.A. 584,818/9/20.
- "AVENIZED"; for food preservatives made from cereal products and oil-bearing seeds, not for use as ingredients in food (2). By The Quaker Oats Co., 141 West Jackson Boulevard, Chicago, U.S.A. 586,172. (Associated.)
- "SEA-PINE DIS CON" label design with two pine trees; for disinfectants and deodorisers made from seapine extracts, excluding soap (2). By Kay Brothers, Ltd., Hurst Street, Reddish, Stockport. B585,402. (Associated.)
- "VISPRAY"; for disinfectants and deodorisers (2). By New Hygiene, Ltd., 150 Southampton Row, London, W.C.1. 586,831.
- "ZO-OPTYRE" and "OPTYRE"; for agricultural, veterinary and medicinal chemicals, etc. (2) (3). By Samapha, Ltd., 14 King William Street, London, E.C.4. 587,178/9. (Associated.)
- "LIQUEMIN"; for medicinal chemicals (3). By Roche Products, Ltd., 47 Bowes Road, London, N.13. 586,922.
- "VISCOMA"; for medicinal oils, grease, petroleum jelly and ointments (3). By Holroyd's Oil & Ceresine Co., Ltd., 3 New London Street, London, E.C.3. 586,343. (Associated.)
- "WIKABA"; for medicated preparations for colds, hay-fever and asthma (3). By Cefonin Co., Ltd., 11 New Court, Lincoln's Inn, London, W.C.2. 586,640.
- "MOVAMET"; for surgical or curative foot appliances (not medicated) (11). By Padmore & Barnes, Ltd., St. James Road, and Sharman Street, Northampton. 587,082.
- "ELASTRA"; for curative foot and arch supports (11). By Atlas Ago Chemische Fabrik A.G., Industriestrasse 14, Molkau, Nr. Leipzig, Germany. 578,723. (Associated.)
- "BON VOYAGE"; for perfumes (48). By Anglo-Austrian Bag Manufacturing Co., Ltd., Shell Mex House, Strand, London, W.C.2. 584,309.

## Marriages

KERR—WALTERS.—At All Saints' Church, Crowborough, Sussex, on September 10, James D. Kerr, M.P.S., Coylton, Ayr, Scotland, to Kathleen Margaret Walters.

LEACH—MEYRICK.—Recently, at Westminster Cathedral, by Rev. Father Feery, with Nuptial Mass and Papal Blessing, Oscar Leach, B.Arch., A.R.I.B.A., to Nora Agnes Meyrick, B.Sc., youngest daughter of Mr. Henry Corbett Meyrick, L.P.S.I., M.P.S., 75 Claverton Street, London, S.W.1, and niece of Mr. Francis J. Meyrick, M.A., Dublin.

MAXWELL—CHEW.—At Railway Street Methodist Church, Nelson, on September 6, Frank Maxwell, M.P.S., 236 Chapel-house Road, Nelson, to Mary Chew. They will reside at 90 Burleigh Road, Hinckley, Leicestershire.

WILSON—STEEN.—At the Abbey Church of St. Comgall, Bangor, co. Down, Andrew Wilson, Ph.C., Mountpottinger, Belfast, eldest son of the late Mr. Andrew Wilson, Ph.C., Kings Road, Knock, Belfast, to Mary Kathleen Steen.

## Deaths

CLARKE.—At 58 Herne Hill, London, S.E.24, on September 7, Rebecca Clarke, widow of the late Mr. C. Goddard Clarke, formerly member of Parliament for Peckham and one of the original directors of Potter & Clarke, Ltd. Mrs. Clarke was in her eighty-ninth year.

DUNCAN.—At Dundee Royal Infirmary, on September 5, Mr. Arthur Duncan, M.P.S. (Joseph Duncan, Ltd., chemists), 34 Gibson Street, Hillhead, Glasgow, aged sixty-eight. Mr. Duncan was a native of Aughterhouse, near Dundee. He was educated and trained in Glasgow and set up in business for himself after a period as manager for Francis Spite & Co. (now Taylors Drug Co., Ltd.), Hillhead. He leaves a widow, two sons and two daughters. One of the sons, Mr. David Duncan, M.P.S., is in business as a chemist and druggist at Hillhead.

GILL.—On September 5, Herbert Edward Gill, M.P.S., 97 Heneage Street, Birmingham. Mr. Gill qualified in 1899.

MANSON.—On September 2, Stanley James David Manson, M.P.S., 18 St. George's Road, Liverpool. Mr. Manson passed the Minor examination of the Pharmaceutical Society in 1898.

SCHWARZ.—At Amsterdam, on September 11, Samuel Schwarz, managing director of Polak & Schwarz, Ltd., aged forty-three. Mr. Schwarz celebrated in 1937 his twenty-fifth anniversary of joining the firm. He leaves a wife and three children. The funeral took place at Westerveld, Holland, on September 14.

## Coming Events

This section is reserved for advance notices of meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur

### Saturday, September 17

International Grocers' Exhibition, Royal Agricultural Hall, Islington, London, N.1. (Closes September 23.)

### Monday, September 19

Forty-seventh Chemists' Exhibition, Royal Albert Hall, London, S.W.7. (Closes September 23.)

### Tuesday, September 20

Wembley and District Chemists' Association, Railway Hotel, Wembley, at 8.30 p.m. Meeting.

Hair and Beauty Fair, Olympia, London, S.W.14. (Open until September 29.)

### Wednesday, September 21

Guild of Public Pharmacists visit to works and farms of A. Wander, Ltd., King's Langley. Coaches leave 17 Bloomsbury Square, London, W.C.1, at 1.30 p.m.

EXHIBITIONS.—Professional Photographers', Royal Institute Galleries, Piccadilly, London, W.1 (open till September 29). International Photographic, Royal Photographic Society, 35 Russell Square, London, W.C.1 (open till October 8).





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## Chart of War Gases

"THE CHART OF WAR GASES" (Reprinted from C. & D. 30.IV.38.) provides in a concise and clear form a brief description of the chief poison gases; methods of detection; their effects and time action, and an outline of the First Aid methods to be employed to casualties. The chart has been carefully drawn up and is based on information contained in the Home Office A.R.P. Handbooks and the manuals of national First Aid organisations. It should be useful to the pharmacist in the course of his business. Customers interested in the purchase of air raid precautions goods will appreciate a copy for their own use. Chemical manufacturers and firms engaged in all branches of the wholesale drug trade will find the chart of practical use in connexion with arrangements they make for air raid precautions, and it is suggested that copies of the chart should be distributed to their staffs.

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## Information Department

### INFORMATION WANTED

Postal or telephone information with respect to makers or first-hand suppliers of the undermentioned articles will be appreciated.

R/710 No. 914 Asthma Injection	F/101 Cox's worm remedy for puppies
E/121 Champayne Pasteurised Milk	S/121 Gastromag
B/149 Comfy corn pads	W/149 Streamline perfume
	A/149 Tephrosin



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### Mr. Hill's Brilliant Address

THE masterly address given by Mr. J. Rutherford Hill, O.B.E., PH.C. (Chairman of the British Pharmaceutical Conference), a full report of which appears elsewhere in this issue (p. 283), must take its place as an outstanding example of what can be achieved on such occasions. Mr. Hill's address is worthy not only of reading as an item of current interest, but of re-reading by every pharmacist and potential pharmacist. There is perhaps no pharmacist alive today who could pack so much information into so short a discourse, and there is the additional advantage that Mr. Hill spoke from his personal experience of pharmacy, stretching over the period he mentioned, namely, sixty-eight years. There have been many changes in pharmacy in this time, but they have all of them meant the progress of the pharmacist in the professional as well as commercial life in the community. Mr. Hill's address was dominated by the question "What is to be the position of the pharmacist in any future scheme for a co-ordinated national health service?" The story of the events leading up to the present position of the pharmacist was concisely and dispassionately outlined, beginning with the decision of the House of Lords in the London and Provincial Supply Association case in 1880. The result of the interminable conflict between professional services and every-day trading activities was exemplified thoroughly by Mr. Hill. Following on the Charter and the Acts of 1852 and 1868, there was the possibility that pharmacists might be held to have special recognition and protection, since they had what was apparently believed to be a privileged position because it was expedient for them to be granted such a position in the interests of the public. The period when this applied must, of course, now be said to have passed. The position of the pharmacist in relation to the sale of poisons was admirably explained by the speaker. Judged from results, however, it would seem to those who do not take so dispassionate a view as Mr. Hill that so far

as the sale of poisons is concerned, the special need for having a trained person to handle poisons falls to the ground so soon as there is a popular demand or commercial need for a poisonous substance. The sale of such poisonous substances has, of course, been almost completely surrendered, and the cry of monopoly, which is so frequently raised against the pharmacist has, by his acceptance of this view, little meaning today. As has been stated on many occasions in these columns, the chemist, in the interests of the public, is allowed to stock certain poisons, but he must not sell them except under stringent conditions.

Passing to a consideration of the chemist in relation to national pharmaceutical service, Mr. Hill mentioned the enhanced status which individual pharmacists have received, which, it may be added, is not enough.

As he later pointed out, the pharmacist has a right to have something to say in relation to national health services. The dispensing doctor and the prescribing chemist were regarded by Mr. Hill with disfavour. The analogy between the two however, cannot hold, since the dispensing doctor may undertake in his dispensary all that a chemist can do in his dispensing department. On the other hand, no one would ever think of suggesting that the dispensing chemist undertakes work in his dispensary similar to that undertaken by a medical man in his consulting room. If dispensing ultimately falls to the lot of the pharmacist, and in return he is forced to abandon his right to suggest certain medicaments in cases of minor ailments, there are bound to be many repercussions; for example, will it be possible for a manufacturer of proprietary articles to launch a medicament and advertise its virtues to the tune of several hundred thousand pounds a year, and, further, will the man in the street be permitted to recommend certain drugs or chemicals to his friend without let or hindrance? The question is not an easy one to decide, but it is clear in the minds of all pharmacists that the right to dispense Insurance prescriptions is an insufficient reward, when the cost of present-day training as a pharmacist is taken into consideration. By degrees the standard of qualification adopted for pharmacy has been raised far beyond the needs of the calling as it is at present. This is a fact which up to the present time may have been lost on authorities. It has been adequately demonstrated that the chemist has no monopoly, that he is not only badly paid by the Government, but not paid in full, and that he is subjected to fierce competition by unqualified traders. The net result is that the business of pharmacy is looked upon askance by those who consider pharmacy as a career for their sons and daughters.

Delegates, no doubt, have now been entrusted with the views of those chemists whom they represent for presentation at the N.H.I. conference on September 21 in London of representatives of pharmaceutical committees. There has been acrid comment in regard to the unsuitability of the date of the conference and to the possibility that the deficiency of 1937, which amounts to the not inconsiderable sum of £86,035, may be written off. Mr. Hill's address has shown that over a period of at least sixty years the trade has readily conformed to the wishes of the various governments of the day in every way. The time is now at hand when the position of the pharmacist in the community must receive tangible Government recognition, otherwise professional pharmacy, as Mr. Hill has defined it, is likely to become a dwindling branch of the business with results which are perhaps at this stage better left to the imagination.



## Cheaper Vanillin

THE notification of a reduction in the Convention prices for vanillin in this market, exclusively reported in our Trade Report last week, was not altogether unexpected. Previously, the five cwt. quantity had been quoted at 12s. 5d. per lb.; it is now down to 11s. for both ex clove oil or guaiacol material. The necessity for adjusting home trade prices to this lower level has not been brought about by the cheaper prices for American vanillin. The latest quotations from New York are \$2.10 for ex clove oil and \$2 for the guaiacol or lignin commodity. Even if American vanillin of any description was available for export to this market, and reports are definite that it is not, and this is supported by there being no trace of imports here from that source, the price at which it could be sold would have been barely competitive with home trade prices in force prior to the reduction now notified. After making fair allowances for shipper's profit, freight, insurance landing charges, key industry duty and importer's profit, the delivered price in this country would be about 12s. 3d. per lb.

Recently there has been a number of cheap offers of vanillin from Holland and some from France. The Dutch quotations appeared mostly to refer to Swiss material. It does not seem, however, that recent imports from these sources have been of much importance. Still, the competition was evident; the home manufacturers have taken the early precaution of checking it, and at their new range of prices they should meet with no difficulty in maintaining their position in this market. At infrequent and short intervals during the past twenty years the market has been competitive and under these conditions prices reached very low levels, with down to 10s. per lb. recorded for bulk quantities of ex guaiacol material. The present Convention figures are, however, by far the cheapest controlled values recorded during the past two decades. Up to 1926 the post-war price was well over 20s. per lb. In 1928 the average was about 16s., and in 1929 and 1930 competition brought the market down to 14s. In 1931, 16s. to 18s. 6d. was quoted, and in 1932 and 1933, 14s. 9d. to 16s. Values in 1934 and 1935 were between 13s. 3d. and 14s., and at the close of 1936 12s. 9d. was the 5-cwt. price, followed by 12s. 5d. in December, 1937, with that figure maintained until two weeks ago.

The former range of prices allowed a fair margin of profit to dealers who purchased bulk quantities and re-sold in small parcels. The new scale has been narrowed down considerably, with only threepence difference between the five cwt. and 56 lb. lot prices; previously it had been sevenpence. There is now little to attract dealers to do the small parcel business; on the other hand, the makers may have found that parcels of 1 cwt. and less were being re-sold cheaper than the Convention scale prices for such quantities. The original vanilla flavour was, of course, obtained from the cured pod of that name, and right up to the present time this natural product is used exclusively for the finest flavouring purposes. The manufactured descriptions of vanillin which have followed, namely, ex clove oil, guaiacol and, quite recently, the American lignin product of wood pulp, have catered for the ever increasing popularity of vanilla as a flavour. Prices for ethyl vanillin have been reduced to bring this article in line with current values of vanillin, as follows: 5 cwt., 27s. 6d.; 1 cwt., 27s. 9d.; and smaller quantities 28s. per lb.

## Marine War Risks Insurance

THE notification that Lloyd's Marine Underwriters have called a meeting for this week to consider important matters in connection with war risks insurance under marine policies is a subject of first importance to all sections of the drug and chemical trade. It will be recalled that early in 1937 the Non-Marine Underwriters decided they could no longer write war risks on land in the United Kingdom, and policy holders who held such cover against loss of property and/or goods were notified accordingly. An appeal to the Government to institute a national scheme was rejected, the authorities stating the idea was not practicable. To-day, therefore, all such goods and property are uninsured against damage or loss caused by enemy action. It is chiefly on account of this risk being rejected by the Underwriters and thrown on owners that importers and dealers have reduced their stocks of many important raw materials.

It is not known at the moment what action, if any, the Marine Underwriters will decide upon. They may agree to increase the rate for war risks or they may decide to follow the Non-Marine section and decline to write war risks by making all policies "Free of Capture and Seizure." The results from such drastic action, which is not, at the moment, considered likely, would be immediate and far-reaching. It would have a grave effect on our *entrepot* trade and it would certainly increase the cost of sea-borne merchandise. It may be that the Marine Underwriters desire to test the feeling of the Government on this matter, for it will be recalled that during the last war such insurance was taken over by the authorities, with the insurance companies acting as agents. It was, in fact, one of the very few activities of the Government which showed them a handsome profit. It is known that the Board of Trade has in readiness a complete scheme for the insurance of both ships and cargoes, should an emergency arise.

At the moment c.i.f. contracts have two endorsements on this subject. The first is to the effect that the seller's obligation to insure against war risks shall be limited to covering such risks on the full terms available at the time of shipment by the Institute of London Underwriters. Should the latter decide to reject this risk, loss or damage to goods caused by action of the King's enemies, although sold on c.i.f. terms, would then apparently fall on the buyer. The second endorsement stipulates that any expense for covering war risks on a c.i.f. contract in excess of one-half of 1 per cent. shall be for buyer's account. So if the Marine Underwriters decide to increase their war risks rates—they may vary according to the route over which the goods would pass—the buyer will have to pay the difference. On Wednesday afternoon the Joint War Risk Rating Committee of Company and Lloyd's Underwriters announced that the schedule of rates would be withdrawn forthwith. Confusion followed this announcement and rates quoted for Mediterranean voyages varied from 5s. up to as high as £10 per cent.

**LONGEVITY OF MOSQUITOES.**—The span of life of the malaria-carrying mosquito is an important factor in determining the degree to which it is likely to endanger human life. During the routine work of providing infective material for purposes of malaria-therapy at Horton (Surrey) much valuable information about the longevity of the different malaria carrying mosquitoes of Europe has been accumulated, and is set forth in a "Report on the Longevity of Mosquitoes in Relation to the Transmission of Malaria in Nature," published recently by H.M. Stationery Office. (*Reports on Public Health and Medical Subjects*, No. 85, price 6d.)



# British Pharmaceutical Conference, 1938

## Proceedings

### Opening Session

A DISTINCTLY Scottish note was struck in the Assembly Rooms, George Street, at the opening session of the Conference on Monday afternoon, September 12. The hall was tastefully decorated with tartan festoons, and a splendid array of flowers banked the platform.

Shortly after 3.30 p.m. Mr. John Rutherford Hill, O.B.E., Ph.C., chairman of the Conference, took his seat. Among those supporting him were Mr. Thomas Guthrie (president of the Pharmaceutical Society and president of the Conference), Dr. J. J. Blackie (chairman of the Local Committee), Messrs. A. R. Melhuish, Herbert Skinner, P. F. Rowsell, L. Moreton Parry, W. Deacon, H. S. Forrest (president, Pharmaceutical Society of Northern Ireland), C. H. Hampshire, F. W. Crossley Holland, R. R. Bennett, H. Deane, D. B. Dott, J. B. Mitchell, W. Spence Culbert, M. K. Watt, C. G. Drummond, E. W. Mann (Birmingham), H. N. Linstead, J. Tait, and the Conference secretaries (Messrs. C. E. Corfield and G. R. Boyes).

#### WELCOME BY LOCAL CHAIRMAN

DR. BLACKIE, Edinburgh (chairman of the Local Committee), expressing to the delegates a warm welcome to the city, said that, as most of them were aware, it was customary at the opening session to have a civic representative to give a few words of welcome. The Lord Provost of Edinburgh, however, was not present on that occasion as there would be an official civic welcome in the evening. It fell to him, therefore, to extend to the delegates, on behalf of the local branch and on behalf of his own local committee, a very hearty and very warm welcome. They hoped that the delegates would have a most enjoyable stay in the capital of Scotland.

MR. T. GUTHRIE (president of the Conference), replying, said it gave him very great pleasure to convey thanks to Dr. Blackie and to the committee that had stood behind Dr. Blackie and supported him in the preparations for the Conference. Dr. Blackie had, perhaps, received his thanks by the way that members had given notice of attending the Conference. It was almost, if not quite, a record, since the initiation of these conferences seventy-five years ago. No doubt, he added, most of them liked to attend these conferences for the solid scientific matter. But he felt sure that many liked also to attend in the hope that that solid matter would not occupy too much time and that they would have a few hours—say eight to ten—to see the beauties of the surrounding district. In this city of Edinburgh, if they had the whole sixteen hours of Conference time they could not exhaust the attractions of Edinburgh.

#### A PERSONAL MATTER

MR. J. RUTHERFORD HILL said that before they proceeded with the Conference business he felt it would be becoming to make a reference to the great loss they had sustained by the passing of Mr. T. Edward Lescher, who had been chairman of the Liverpool Conference, 1937. Mr. Hill recalled that on that occasion Mr. Lescher's last words to him were: "I am looking forward to meeting you in Edinburgh and having a very happy Conference there." They would miss him very much. He thought they ought to try to emulate him in his high sense of public duty and his abounding charities. He would like to say, in the formula of his Church, "*Requiescat in pace*"—not "*Vale*" but "*Au revoir*."

Apologies for absence were intimated from Dr. David Hooper and Mr. E. Saville Peck.

#### CHAIRMAN'S ADDRESS

Mr. Rutherford Hill then delivered his address (see pages 283 to 287).

#### VOTE OF THANKS

MR. GUTHRIE, in moving a vote of thanks, said that, apart from the extreme value and extreme interest of the address which they had just heard, he thought first of all he would like to say that they as human individuals and pharmacists were tremendously pleased that that address had been given

from the chair by their old friend, Mr. Rutherford Hill, in his own city of Edinburgh. He understood that the position in connexion with these conferences was that they should not discuss at that point the things that had been said by their chairman, but he felt sure that what Mr. Hill had said would afford something for discussion by smaller bodies of pharmacists for a very considerable time to come. Mr. Hill was one of those men whose middle name should have been "thorough." When he put his mind to a piece of work he was not satisfied unless he had put his whole energy and strength into it. The speaker said that he had had a long knowledge of Mr. Hill, and it was an extreme gratification to find himself to-day standing with Mr. Hill on that platform in the relations in which they stood. He was sure that many of the things in Mr. Hill's address would have a very practical bearing on their future as pharmacists.

Many of his theories would sink into the minds of their people. Mr. Hill had talked about the long grinding of the wheels that had brought about even the partially ameliorative conditions in which pharmacy was now progressing. Mr. Guthrie said he thought these sort of things did move very slowly in this conservative country. People behind movements of that kind, however, would have noticed that, although it seemed to take a long time to gain any real headway, there came a period when there was a sudden jump forward. He was very hopeful that they were approaching such a jump. He was hopeful that some of the ideals which Mr. Hill had indicated would be reached perhaps sooner than might have been expected from the rate of progress which had been obtained up till now.

DR. C. H. HAMPSHIRE, in seconding the vote of thanks, said Mr. Hill had given them in his address a very illuminating review of pharmacy as he had known it through many years. While it was not customary to discuss the chairman's address, perhaps the speaker to a vote of thanks might be allowed to make one little criticism. His criticism was that the address did not bring out sufficiently—hardly at all—the share which Mr. Hill himself had had in bringing about the events he had related. His part was well known to everyone. Dr. Hampshire said that another circumstance which he thought was pleasant that day was the fact that the vote of thanks should have been proposed by a brother Scotsman—a brother Scotsman with whom the chairman had been associated for many years. Dr. Hampshire proceeded to say that he might with due humility presume to speak for the others and to make it clear that the vote of thanks was universal throughout pharmacy. He was sure that they had all enjoyed the reading of the review, and, above all, that they appreciated the hopeful note that had been struck and the inspiring words of the oration. They would accord that vote of thanks for several very good reasons, not the least of which was Mr. Hill's pleasant personality and the engaging way in which he had delivered his address.

MR. HILL, replying, said he entirely agreed that the top of the mountain would not be reached to-morrow, or perhaps the next day even, but if his experience was of any value there was nothing like holding on and moving on. Difficulties disappeared as they faced them, but they would crush those who attempted to evade them. So long as humanity remained there would remain a sphere for the pharmacist, and he would get it if he deserved it. It was up to them to face the future with every confidence and seek to attain the desire they had in view.

### Science Session

Tuesday Morning, September 13

THE first meeting of the Science Session of the Conference took place at the Assembly Rooms on Tuesday morning, September 13, Mr. J. Rutherford Hill in the chair. In his opening remarks the chairman referred to the representative gathering and the importance of the Science Section.

The first paper on the list was by Mr. J. P. Gilmour. Mr. Hill, from the chair, said that he was sure everyone regretted



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the absence of Mr. J. P. Gilmour, and in the circumstances he proposed to follow the usual custom, which was also the author's wish, and take the paper as read.

## Phases of Pharmacy in Edinburgh

By J. P. GILMOUR

[ABSTRACT]

THIS historical sketch reveals that a house and booth in the bellhouse of Edinburgh was tenanted by "Maister Stephanie," an apothecary, in the reign of James II (1431-60), which business was continued into the eighteenth century. The title "pharmacia," phonetically "farmatia," occurs in the Charter of James I, founding the Glasgow Faculty of Physicians and Surgeons and denoted a "surgeon-apothecary" or "surgeon-druggist." The first Edinburgh directory (1773) contained twelve entries relating to "druggists," the thirteenth being designated "apothecary." All the operations of practical pharmacy were done on the premises, but dispensing lacked much in refinement, as unless medicine was nasty it was not believed to have any efficacy. Powders were packed in odd scraps of paper and mussel shells served as ointment containers. Edinburgh enjoys the distinction of having made valuable additions to medicine, including Gregory's powder (by Professor James Gregory, 1753-1821), Hamilton's Pills (Professor James Hamilton, 1749-1835) and the discovery of the anæsthetic properties of chloroform by Sir J. Y. Simpson. Boric acid was introduced as an antiseptic by Lister in 1871, and the original researches by Professor Hughes Bennett contributed materially to the adoption of cod-liver oil as a therapeutic agent. The transfer of the preparation of drugs and chemicals from the "chymist's" shop to the manufacturing laboratory marked the transition from empirical to technical and scientific production. Three historic houses in Edinburgh evolved from the official stage (Duncan Flockhart & Co., J. & F. Macfarlan, and T. & H. Smith), each specialising in the production of alkaloids and other fine chemicals as well as pharmaceutical products. A new era of pharmaceutico-chemical industry was inaugurated about 1831 by the calcium chloride process of Professor William Gregory (1803-58) for extracting opium alkaloids. The differential spirit duty in favour of Scotland of 6s. 2d. per gallon (against 11s. 8d. in England) accruing from the Union of Parliaments in 1707 was a material advantage, but its equalisation in 1860 did not affect the demand created by the prestige of Edinburgh products.

The pioneer pharmaceutical organisation in Scotland was the Druggist-Apothecaries' Association (1783), of which the sole remaining memorial is a framed copy of its Articles of Association hanging in the house at York Place of its successor, the North British Branch of the Pharmaceutical Society, established nearly a century ago. Poisons law began in 1450 by Act of Parliament in the reign of James II, when all persons were forbidden to bring home poison under pain of treason and death by boiling alive in oil. In 1784 the Edinburgh Town Council anticipated present-day procedure by ordaining that arsenic and other deadly poisons be sold only on presentation of a written order specifying the quantity required and the use to which it was to be put. Pride of place in pharmaceutical literature is taken by the Edinburgh Pharmacopœia (1699-1841), though of the 1,009 medicaments in the Ph. Ed., 1741, fewer than 100 survive in the current B.P.

There was no discussion.

The second paper to be presented was read by the chairman on behalf of the author. The subject was:—

## Strychnine-Bordeaux B Compound

By D. B. DOTT

[ABSTRACT]

STRYCHNINE dissolved in water containing an equivalent of N/1 sulphuric acid and mixed with a solution containing the corresponding weight of  $\alpha$ -naphthalene-azo- $\beta$ -naphthol-3:6-disulphonic acid results in an immediate separation of a compound in which strychnine replaces two atoms of the dye (Bordeaux B). The product after drying and powdering is nearly black in appearance. It is sparingly soluble in water and more soluble in alcohol. The compound contained 48.77

per cent. of strychnine compared with 50.41 per cent. calculated for the di-strychnine compound of Bordeaux B.

Assays of strychnine in compound syrup of glycerophosphates (which contains excess acid) give results in excess of the amount actually present and suggest that some decomposition occurs on keeping. Hence doubt is expressed as to the commendation in the B.P. Codex that Bordeaux B is "practically unaffected by dilute acids and alkalis," and this matter is being investigated.

## DISCUSSION

MR. DOTT pointed out that this was only a short paper and was incidental in investigating Garratt's process. The problem is whether there is decomposition of the Bordeaux B or whether it is a compound. Though from a medicinal point of view the apparent excess of strychnine would not be serious, from an analytical point it would be.

MR. TREVES BROWN claimed that Bordeaux B has proved satisfactory in Codex preparations, with one exception. Syrup of glycerophosphates has given rise to considerable correspondence in the Codex department. Experiments at Bloomsbury Square had shown that complaints were due to the use of calcium glycerophosphate or Bordeaux B not of Codex standard. The dye used for the Codex experiments was guaranteed pure. The syrup in their experiments was satisfactory, and no strychnine should come down. Bordeaux B has not proved satisfactory in the bromide and strychnine mixture of the National Formulary, but he assured pharmacists that the precipitate in this case was not strychnine.

MR. WILSON (Burntisland) expressed the pleasure of Scottish pharmacists at Mr. Dott's paper, which opened the question of dyes as complete substances, and he gave other instances which had come to his notice, notably concerned with methylene blue. Mr. Dott, in his reply, referred to the insolubility of Bordeaux B with quinine and other alkaloids, and expressed a doubt about the value of some of the "new-fangled" colouring matters.

THE CHAIRMAN said dyes should prove suitable for valuable contributions to the Conference, and stressed the need for dyes to be accurately described with character tests.

The next paper taken, read by Miss Temple, was:—

## Vacuum Drying of Extracts

By H. BERRY and E. M. TEMPLE

[ABSTRACT]

DRY extracts of krameria were prepared from three different samples of krameria root, concentration of extractive and drying being carried out in a stainless steel pan under reduced pressure at a temperature not exceeding 70°C. All three extracts were light reddish-brown (or almost cinnamon) in colour, the residues insoluble in cold water being 1.8, 2.0 and 5.2 per cent. Two other extracts made by students in 1936 and 1937 were similar in colour and the water-insoluble residues amounted to 2.2 and 8.4 per cent.

Commercial extracts exhibit surprising differences in colour and water-insoluble residue, as is evident in Table I. In particular, the high proportion of water-insoluble material in ex-

TABLE I  
Commercial Samples of Dry Extract of Krameria

Sample	Appearance	Percentage of residue insoluble in cold water
A	Cinnamon brown powder ... ..	9.6
B	Red brown granular extract, light reddish brown when powdered ... ..	9.9
C	Light reddish brown powder ... ..	9.9
D	Small dark brown lumps, reddish brown when powdered ... ..	20.7
E	Reddish brown powder ... ..	23.8
F	Dark reddish brown powder ... ..	25.5
G	Reddish brown powder ... ..	26.0
H	Reddish brown powder ... ..	39.7
I	Reddish brown powder ... ..	47.3
J	Very dark brown powder... ..	52.6

tracts D and J is difficult to explain except by gross overheating, presumably by high-pressure steam used in drying. The phlobatannin (or so-called krameriatannic acid) of krameria root decomposes fairly readily into the phlobaphene krameria-



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red, and this is presumably the reason for vacuum concentration and drying in the official process. It is suggested that the official monograph should direct that the temperature during evaporation to dryness under reduced pressure should not exceed 80° C. Unless the temperature is controlled, vacuum drying may be retrograde. A limit of 10 per cent. w/w should be placed on matter insoluble in cold water.

Extracts of cascara were prepared from eight different samples of cascara bark (dried *in vacuo* at 70° C.). These contained 3.9 to 7.7 per cent. of residue insoluble in cold water. Thirteen commercial samples of cascara extract had only three with water-insoluble content below 10 per cent. (i.e., 5.9, 6.6 and 8.8 per cent.). Five others ranged from 12.7 to 19.3 per cent. of residue insoluble in cold water, and the remaining five ranged from 22.6 to 30.8 per cent.

Drastic treatment, such as drying for five hours at 150° C. or for half an hour at 200° C., increased water-insoluble residue from 3.9 to 22.5 per cent., which makes it evident that excessive heat is used in the last stages of drying of commercial extracts. However, there is no evidence that boiling results in inactivation of cascara extractive. Of eleven samples of cascara tablets only two (with 9.0 and 10.6 per cent. water-insoluble matter) indicated careful preparation of the cascara extract. Five showed 15.4 to 20.6 water-insoluble content, and four ranged from 24.1 to 29.8 per cent. The sugar-coated tablets were de-coated before estimating the residue insoluble in cold water. The de-coated tablets showed good uniformity in weights (approximately two grains).

Uncoated cascara tablets were examined and in all cases excipient was added in amount approximating the weight of extract, which curious custom is difficult to account for or defend. A 10 per cent. limit is suggested for water-insoluble matter in cascara extract, with drying temperature not to exceed 100° C. (From the research laboratory of the College of the Pharmaceutical Society.)

## DISCUSSION

MR. DEANE had two criticisms to offer on the paper: (a) the possibility that the drug had been extracted with hot water giving a higher yield of extract; (b) the reports were based on laboratory experiments, whereas the conditions prevailing on the manufacturing scale were very different. He thought that lower temperatures might be used in making these extracts.

MR. BAILEY suggested that there was room for investigation with modern evaporating plant in connexion with pharmaceutical extracts, and mentioned the spray method used in milk drying as an example.

MR. FRANKLIN stated that he had received a complaint regarding extract of liquorice, which was returned, but found on examination that an extract which appeared to be unsatisfactory from the pharmacists' point of view was shown to be one of the most perfect samples of extract he had met.

MR. BERRY, replying to Mr. Deane, said that he should remind him of the B.P. directions in preparing these extracts. These were based on principles which were applicable by practising pharmacists, and any deviation from this method should only be in minor detail. He thought that modern plant might easily be adapted for the manufacture of pharmaceutical extracts. Methods such as the creeping film evaporation, roller drying and spray drying were referred to.

MISS TEMPLE said in regard to the ageing of commercial extracts that samples had been kept for six months, but they showed little difference on assay from their previous examination.

MR. RUTHERFORD HILL complimented Miss Temple on the excellent manner in which the paper was read.

The next paper was, in the absence of the author, read by Dr. Hampshire. The subject was:—

## Keeping Properties of Phenol Ointment

By G. R. PAGE

## [ABSTRACT]

PHENOL ointment made by adding approximately 3 per cent. of phenol to the weighed base (500 gm.) at 60° C., lost 3.7 to 5.2 per cent. of phenol, though this was the lowest temperature at which complete solution thereof could be effected before the ointment began to solidify. The ointment stored in pots

with loosely fitting earthenware covers loses phenol rapidly and the strength may diminish by as much as 11.2 per cent. in ten months and 28.2 per cent. in twenty-five months. Storage in a warm cupboard, under conditions which may obtain in tropical countries, caused the loss to increase to 17 per cent. in ten months and 35 per cent. in twenty-five months. Very little loss of phenol occurred in ten months when the ointment was stored in collapsible tubes. A sample of phenol ointment stored at room temperature in a 2-oz. pot covered with grease-proof paper lost 28 per cent. of phenol from the top layer in five months compared with 7.14 per cent. from the whole (mixed) sample. Hence removal of ointment from the upper part of the container, whether for sale or analysis, gives a sample which may be much weaker than the bulked ointment. Specimens of ointments purchased from retail pharmacies were assayed by the U.S.P. XI method after the contents had been well mixed. The results are given in the table below.

Description	Per cent. C <sub>6</sub> H <sub>5</sub> O
Tin containing about 15 gm. labelled "Carbolic Ointment (phenol ointment B.P.)" ...	2.73
Cardboard box containing about 30 gm. filled from stock jar. Labelled "Carbolic Ointment" ...	2.17
Tin containing about 12 gm. Labelled "Carbolic Ointment B.P." ...	2.30
Screw-capped jar containing about 25 gm., filled from stock jar. Labelled "Carbolic Ointment" ...	0.47
Tin containing about 12 gm. Labelled "Carbolic Ointment, guaranteed B.P." ...	1.65
Stamped proprietary. Tin containing about 20 gm. Labelled "Carbolic Ointment" ...	7.69
Stamped proprietary. Tin containing about 20 gm. Labelled "Carbolic Ointment" ...	7.73
Stamped proprietary. Tin containing about 20 gm. Labelled "Carbolic Ointment" (old stock) ...	3.57
Tin containing about 12 gm. Labelled "Carbolic Ointment" ...	1.77
Screw-capped pot containing about 12 gm. filled from stock jar. Labelled "Carbolic (phenol) Ointment" ...	2.21
Screw-capped jar containing about 60 gm. Labelled "Carbolic Ointment B.P." ...	2.30
Screw-capped jar containing about 30 gm. filled from stock jar. Labelled "Phenol Ointment" ...	2.12
Tin containing about 12 gm. Labelled "Carbolic Ointment B.P." ...	2.50
Screw-capped jar containing about 30 gm., filled from stock jar. Labelled "Phenol Ointment" ...	1.40

(From the British Pharmacopœia laboratory.)

## DISCUSSION

MR. SAVAGE inquired the reason why the method of analysis was distillation.

MR. H. BERRY asked if the author had made any investigation regarding celluoid and synthetic-resin types of caps and containers.

MR. BRINDLE (Manchester) pointed out the importance of these types of information to the practising pharmacist and drew attention to another preparation, namely eucalyptus ointment, which has been causing trouble.

MR. POWELL (Nottingham) pointed out that phenol lozenges lose phenol even more rapidly than the ointment. As regards the use of collapsible tubes, he asked if there had been any investigation as to reactions, and pointed out that even pure tin tubes vary in composition. He also called attention to the somewhat high loss and asked what allowances had been made.

MR. J. H. FRANKLIN said the present ointment had better keeping properties than former preparations. This had been brought about by the introduction of a little soluble fat. He raised the question as to whether a new formula or a new basis was required and if there were more soluble fat the ointment would probably keep better.

MR. CORFIELD said it was the duty of the public analyst to investigate any substance submitted to him, but it was also his duty to investigate conditions which may produce deterioration. He considered there was no standard in the Pharmacopœia for phenol ointment, therefore no reason for the pharmacist being assailed. In the case of other ointments, such as boric, the acid and the base are stable; therefore, if correctly made, it could be standardised. There is no definite standard in the Pharmacopœia as to how much phenol is lost. It was important if the ointment was unsatisfactory for the Pharmacopœia to say how to keep it and how long.

MR. BAILEY considered that it was not wise to draw general conclusions that an upper level lost strength quicker than a



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lower level. He had found the reverse in ammonium carbonate solution. Temperature and rate of loss may have some bearing on the matter.

MR. A. J. JONES agreed that storage conditions as suggested by Mr. Corfield were needed. It also seemed necessary to set a limit of time when it is known that products do deteriorate. He thought a system of dating should receive recognition.

MR. MELHUISE was interested in Mr. Corfield's remarks in view of the difficulties of pharmaceutical subcommittees investigating Insurance dispensing matters. He pointed out the difficulties of defending a colleague, as it might be considered that such a preparation should be freshly made. Much would of course depend on how the analyst's report was drawn up.

MR. CORFIELD said he did not think Mr. Melhuish had had any sleepless nights due to his (Mr. Corfield's) reports. (Laughter.)

MR. HAMPSHIRE, in reply, said the objects of the paper were to get information for the Pharmacopœia Commission. In dealing with other points raised Dr. Hampshire said the matter of the celluloid or bakelite tops had not been investigated, as the object was to find the loss under the worst storage conditions. He thought the action on metal ought to be looked into. The results had only been corrected for purity. Work on a new basis was going on at present. It was not right to keep, say, 1 lb. of the ointment in a paper-covered jar and then scrape off the top and put it in a screw cap jar. It was not sufficiently realised that it was not safe to take the top layer.

THE CHAIRMAN said the matter of suitable containers wants looking into not only in this case but generally.

The next paper was:—

## Estimation of Nicotinic Acid in Liver Extracts

By G. E. SHAW and C. A. MACDONALD

[ABSTRACT]

NICOTINIC acid and its amide have recently gained prominence as curative substances for the deficiency diseases pellagra and canine black tongue. They seem also to be of importance in cellular metabolism and the prevention of panmyelophthisis in rats. The relative content of nicotinic acid in commercial liver extracts is of interest owing to their use in pernicious anæmia and vague conditions of debility. The cyanogen bromide method for estimation of nicotinic acid is investigated, and it is found that the best results are obtained by correcting for non-specific colour by subtraction of a blank control, attempts to decolorise the test solution with charcoal being abortive owing to adsorption of nicotinic acid thereon.

The cyanogen bromide reagent is prepared by decolorising freshly prepared bromine water (saturated at 17° to 18° C.) by the gradual addition of 10 per cent. solution of potassium cyanide. It remains stable in a tightly stoppered bottle for several days. The yellow colour produced with nicotinic acid is satisfactory for a range 0.01 to 0.07 mgm. when using 6 mls of cyanogen bromide reagent with 1 mil of solution of redistilled aniline (0.4 per cent.) in alcohol (purified by redistillation over sulphuric acid). The colour reaches a maximum in about five minutes and then slowly fades. It was found that a concentration of N/2 hydrochloric acid or N/2 sodium hydroxide completely hydrolyses nicotamide to nicotinic acid, whilst lower concentrations are ineffective. The method adopted is as follows:—

**The Test Solution** is prepared by pipetting 2 mls of liver extract into 18 mls of purified alcohol. The mixture is heated to 50° C. with stirring and kept thereat for five minutes, and then filtered through a No. 1 Whatman filter paper. The solution has a very slight yellow colour.

**Hydrolysis of Amide** is effected by evaporating 10 mls of the test solution just to dryness on a water bath. The residue is dissolved in 4 mls of N/1 hydrochloric acid and heated on a boiling water bath for ten minutes. After cooling, 10 mls of N/1 sodium hydroxide are added and the solution transferred to a test tube and made up to 10 mls with distilled water.

**Colour Development** is performed on an aliquot portion of the solution containing the hydrolysed nicotamide and all the original nicotinic acid. The amount found by trial to give a

suitable colour is bulked to 3 mls (with alcohol and water in the proportion of 1:2) and 6 mls of cyanogen bromide reagent is added. This is followed by 1 mil of 0.4 per cent. aniline solution, mixing after addition of each reagent. The colour is allowed to develop to a maximum and the yellow units read in a Lovibond tintometer using a 10 mm. cell.

The results in the table below relate to milligrams per 100 mls or grams of liver extract (1-8) and per 100 mls of parenteral extract (which cannot be referred to a uniform denominator of concentration). The figures given are a maximum as other pyridine compounds may be present and such "manufacture pyridine" may be significant in very-low-value extracts. It is not possible to give data as to the ratio of nicotamide to nicotinic acid as the coloration due to amide is not constant or reproducible.

Nicotinic acid content of commercial liver extracts (mgm. per 100 mls or grams)

Liquid liver extract			Dry liver extract			Parenteral liver extracts		
No. of sample	Before hydrolysis	After hydrolysis	No. of sample	Before hydrolysis	After hydrolysis	No. of sample	Before hydrolysis	After hydrolysis
1	52	52	1	49	49	1	100	105
2	42	50	2*	11	14	2	98	102
3*	48	50	3*	9	10	3	40	43
4	18	42	4*	7	9	4	37	38
5	33	36	—	—	—	5	24	37
6	33	35	—	—	—	6	26	36
7*	25	26	—	—	—	7	28	28
8	14	23	—	—	—	8	28	28
9*	11	14	—	—	—	9	15	20
10*	13	13	—	—	—	10	9	10
11	13	13	—	—	—	11	6	8
—	—	—	—	—	—	12	4	4
—	—	—	—	—	—	13	4	4
—	—	—	—	—	—	14	3	4
—	—	—	—	—	—	15	<3	4
—	—	—	—	—	—	16	<3	<3

\* British Pharmacopœia preparations.

The liver extracts vary greatly in nicotinic acid content, even pharmacopœial products differing widely. This may be due to inefficient extraction of the liver or to adsorption of the precipitate with alcohol from strong aqueous solutions.

The term "Liver Extract" does not describe a definite entity but a preparation with curative properties for pernicious anæmia. Such term is inapplicable without qualification when the particular liver extract is used for the treatment of other conditions. Thus parenteral liver extract No. 1 would probably be satisfactory in pellagra but No. 16 would be ineffective. Parenteral extracts Nos. 11 and 13 have a very low content of nicotinic acid despite their high liver equivalents (1 mil being equivalent to 50 gm. and 25 gm. respectively). However, these are effective in small doses for pernicious anæmia, whilst much larger doses of Nos. 3 and 4 are required to produce the same clinical effect. Parenteral (1=20) extracts Nos. 6 and 9 are issued by the same manufacturer, the latter with significantly lower nicotinic acid content being claimed to represent "the whole of the therapeutically active substances in liver including the hæmopoietic principle." Evidence that the Dakin and West method does not yield a pure hæmopoietic substance is afforded by the presence of a small but definite amount of chromogen in parenteral extracts Nos. 12 and 14 made by this method. It is not known whether nicotinic acid plays any part in pernicious anæmia, but this is essentially a gastric lesion and nicotinic acid is probably an essential food factor. It is definitely established that pellagra responds dramatically to the acid, which also cures porphyruria due to lead poisoning, arsenic poisoning, barbiturate poisoning and certain toxic effects resultant on sundry infections. On animals it is curative for canine black tongue and wasting disease of swine. It is also preventive of nutritional degeneration of bone marrow in rats. Nicotinic acid has not been tried in cases of tropical anæmia, but it is known that parenteral extracts Nos. 3 and 4 are effective in this condition, whilst Nos. 13 and 14 with low content thereof are unsatisfactory. The available evidence suggests that a certain amount of the true pernicious anæmia factor is required also, but the deficiency of nicotinic acid in the diet of those liable to tropical anæmia indicates its possible utility for this condition. (From Evans' Biological Institute.)



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## DISCUSSION

MR. NORMAN EVERS thought that the authors had been a little optimistic in describing their findings, as other compounds present in the extract may give similar results. He asked how they ensured the absence of the pyridine nucleus in the tests.

MR. R. R. BENNETT recalled that Dr. Lucy Wills at first used relatively crude extracts of liver for the treatment of the various tropical anæmias. On the other hand, other workers had used very pure extracts and had obtained similarly good results. He thought that it was not yet known what the true anti-pellagra preventing factors are.

MR. GARTSIDE, replying to Mr. Evers, on the specificity of the tests, said the authors were aware that the pyridine nucleus could be present in other compounds in certain commercial extracts, and indeed were known to have been present in samples tested and bought in the open market, but in samples made by the authors, the latter were satisfied that no pyridine nucleus was present.

The next paper was on:—

## Papain Preparation of Nutrient Media

By A. F. WATSON, R. A. TAGGART and H. F. MANNION

## [ABSTRACT]

DRIED papain juice of high proteolytic activity has become available during recent years and advantage has been taken of this in using papain for preparing nutrient media containing a mixture of muscle extractive and protein degradation products. Papain digests of animal proteins (using 0.5 to 1.0 gm. of papain per lb. of horse or calf muscle) can be carried out under optimal conditions (60° C. and pH 5.6) for long periods without fear of bacterial contamination. The media may contain as much as 10 per cent. of total solids (in the water/muscle ratio of 500 mils/lb.) or as little as 1.5 per cent. (3,000 mils/lb.). Ten-day diphtheria cultures on papain digest media gave rapidly flocculating toxins with an average value of 20 Lf units. The toxins from low-solid-content media were easily detoxified (with formalin at 37° C.), in three to six weeks, whereas it was increasingly difficult to render them atoxic with increase in total solid content of the media.

Toxins from low-total-solid media proved suitable for the production of antigens. Thus the antigenic value of alum-precipitated toxoid (A.P.T.) made from such papain-digest media was particularly good, only three out of forty-one guinea pigs failing to become Schick-negative six weeks after a "one-shot" injection of so small a dose as 0.1 mil. Toxoid-antitoxin floccules (T.A.F.) were not so effective, but two injections of 0.1 mil at three weeks' interval were 77 to 91 per cent. Schick-negative in five out of the six batches tested at the end of six weeks. Papain-digest media with 8 to 10 per cent. of total solids (when suitably diluted with fresh horse or veal muscle extract and enriched with glucose) proved to be a valuable medium for growth and toxin production of *Welchii* and tetanus strains. Lamb dysentery filtrates (*Cl. Welchii*, Type B) gave toxoid readily with formalin at 37° C. and proved of very high value for the hyperimmunisation of horses in the production of lamb-dysentery sera. There is little doubt that the use of antigens with low-total-solid content has considerably reduced the frequency of abscesses in immunised horses. This has been particularly the case in horses injected with diphtheria and scarlet-fever antigens made from papain-digest media. Certain veterinary products such as abortion vaccine and lamb-dysentery vaccine can be readily produced from papain-digest media, and there is little doubt that equally good results are possible with many other types of vaccine. (From Evans' Biological Institute.)

This was read by Mr. Gartside, and there was no discussion.

The next paper was on:—

## Preparation of Pituitary (Posterior Lobe) Powder

By H. GARTSIDE, J. PRITCHARD and F. E. RYMILL

## [ABSTRACT]

AN acetone-dried powder of pituitary (posterior lobe), for use in preparing ext. pituitarii liq., would overcome the difficulty of obtaining fresh (ox) glands in quantity. The method of

preparation is similar to that for standard powder, the frozen glands being stripped of skin and other tissue and the separated posterior lobes dehydrated in several changes of acetone. The acetone is removed in a vacuum over a temperature not exceeding 50° C., and the product is reduced to a No. 20 powder and re-dried for four hours before placing and sealing in a dry container, a sample being withheld for estimation of oxytocic activity and determination of moisture content. The meat-exporting countries have been the main source of supply of pituitary glands for many years and good glands are separate, showing that they have been individually and quickly frozen before packing in hermetically sealed tins (which are kept frozen until required). The number of untrimmed glands per lb. gives no useful information as to their condition, but figures for trimmed glands of South American origin fall into two groups, the first with 240-280 glands per lb. and the second with 300-360 glands per lb., the yield of dry posterior lobes being relatively smaller from the smaller glands. A good consignment gives not less than 11.0 gm. of dry posterior lobe per lb. of untrimmed gland, whilst the yield from poor glands may be under 5.0 gm. The ratio between dry posterior and dry anterior lobe is approximately 1:5.

Pituitary (posterior lobe) powder prepared by acetone drying contains 900 to 1,200 International units per gm., as compared with 2,000 units expected in standard powder made immediately after removal of glands from the animal. The loss is believed to occur before dehydration, but the activity of the commercial product has been remarkably uniform over a number of years. Dry posterior lobe powder absorbs moisture very readily, but 5 per cent. is considered as the maximum permissible. Such powder, stored in sealed containers, shows a negligible loss in oxytocic activity when kept at room temperature for several months.

The inclusion of an acetone-dried posterior lobe powder in the next revision of the British Pharmacopœia might be considered, as there seems to be no justification for prohibiting its use when the standard powder is prepared in this manner. The amount required for a batch of extract of any required size would be immediately available and the biological assays on the finished extract would be checked as to efficiency of extraction by previous tests on the powder. (From Evans' Biological Institute.)

## DISCUSSION

MR. R. R. BENNETT thought the authors had made a very good case for the authorisation of dried powdered pituitary gland in the next Pharmacopœia. In commerce it was generally found that there was a great difficulty of obtaining adequate supplies of fresh glands.

MR. GARTSIDE emphasised in reply that the authors had found the use of dried powdered pituitary gland quite satisfactory in the preparation of the extract.

The next paper, read in abstract by the author, was:—

## Solutions of Procaine Hydrochloride for Surgical Use

By KENNETH BULLOCK

## [ABSTRACT]

THE work relates in the first place to the dispensing of alkaline solutions of procaine hydrochloride and secondly to the rate of decomposition during sterilisation and storage. It is shown that procaine hydrochloride is stable in acid solution (pH below 5) but is rapidly decomposed, especially if heated, in solution of pH over 7.0. The presence of adrenalin makes the decomposition problem more acute, as this substance is still more unstable than procaine in alkaline solution. Three dispensing methods are discussed:—

(1) The use of tablets of procaine-adrenaline-bicarbonate or phosphate which suffice if the tablets are sterile and the solutions made up under aseptic conditions, the latter being a difficulty.

(2) The use of three separate stock solutions:—

(a) Procaine hydrochloride solution stabilised by acidification with a trace of hydrochloric acid.

(b) An alkaline buffer solution of sodium phosphate, potassium acid phosphate, and sodium chloride.

(c) The usual 0.1 per cent. solution of adrenaline hydrochloride.



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Solutions (a) and (b) are sterilised separately by boiling and the requisite quantity of (c) added to (a) before completion of the boiling. For injection equal quantities of (a) and (b) are mixed in the syringe to give a solution of correct strength with  $pH$  of 7.5.

(3) The best possible technique appears to be "Fisher's dry ampoule." The ampoules (or vaccine bottles) enclose the dry composite powder in a sterile condition, the composition being such that when the stated amount of sterile water is added this produces a buffered isotonic solution of required  $pH$  and correct strength of procaine and adrenaline. For hospital use 20-ml vaccine bottles are employed, these being of the type closed by a thick rubber disc held in place by a screw-on bakelite ring. The sterile water (20 mls) is added *via* the needle of a hypodermic syringe pushed through the disc, a second needle being inserted to permit free escape of air. After solution of the powders, 1 or more mls of sterile solution may be drawn off as desired.

Test of the rate of decomposition was made upon solutions containing 2 per cent. of procaine hydrochloride and 0.0013 per cent. (1 in 75,000) of adrenaline made from dry salt mixtures as follows:—

	A	B	C	D
Procaine hydrochloride ...	75.05	66.63	66.62	40.0
Adrenaline ...	0.051	0.043	0.043	0.026
Sodium chloride ...	20.57	—	—	—
Sodium phosphate ...	1.33	24.09	33.3	59.95
Sodium acid phosphate ...	—	0.23	—	—
$pH$ of solution ...	7.3	7.3	8.3	7.0
				Hypertonic

Anhydrous sodium phosphate and acid phosphate are employed to avoid moisture, these and sodium chloride being sterilised by heating at 150° C. for one hour. Procaine hydrochloride must not be heated beyond 130° C. (for one hour) owing to danger of local melting. Adrenaline is moistened with alcohol (70 per cent) and, after standing for one hour, the alcohol is sucked off on a filter pump and dried for a short time at 100° C. A fifth solution E of procaine hydrochloride (2 per cent.) was made isotonic with sodium chloride (0.54 per cent.). The following practical conclusions are made:—

(1) Alkaline solutions of procaine cannot be sterilised without becoming acid or marked decomposition (see Table I).

(2) Alkaline solutions of procaine hydrochloride cannot be stored for any considerable time without considerable decomposition or fall in  $pH$  value.

(3) Alkaline solutions of procaine may be kept for six hours at room temperature or at 37° C. for six hours without appreciable decomposition. Freshly prepared solutions are a necessity when adrenaline is present. Solutions B and C remain colourless for the longest time, becoming faint yellow in three and two hours respectively. Solution A turns faint pink in fifteen minutes, and solution D faint yellow in ninety minutes.

(4) The initial rate of decomposition of procaine depends upon the  $pH$  value, but the total decomposition depends upon the quantity of alkali available before acid reaction (and relative stability) is attained.

TABLE I

Rate of decomposition of procaine hydrochloride solutions on boiling

Solution	A		B		C		D		E	
	$pH$	Per cent. decomposition	$pH$	Per cent. decomposition	$pH$	Per cent. decomposition	$pH$	Per cent. decomposition	$pH$	Per cent. decomposition
Just boiled	7.3	0.75	—	1.5	3.25	3.64	3.35	4.5	—	—
2 mins. ...	7.1	1.5	—	5.63	5.0	12.03	5.2	12.76	—	—
10 mins. ...	6.1	3.70	—	10.63	7.3	31.34	7.5	44.54	5.1	0.75
30 mins. ...	5.0	5.77	—	37.01	6.7	54.24	7.3	77.1	4.6	0.75
2 hours ...	4.5	7.59	—	61.93	6.1	79.41	7.3	100	4.6	1.5
6 hours ...	4.5	12.93	—	—	—	—	7.1	100	4.6	4.34
Initial $pH$	7.3	—	7.3	—	8.3	—	8.5	—	5.3	—

In the case of solution D the whole of the procaine base

can be removed by shaking out with chloroform so that no demand is made on the alkali of the blood stream to make the procaine available for transference to the lipid matter of the nervous system. Solutions A and B are isotonic and  $pH$  7.3, but A only yields 7.23 per cent. to chloroform against 60.06 per cent. from B. Hence the immediately available base depends upon the buffer alkali present in the solution.

Examination of five different commercial brands gave the analytical data in Table II. Two batches of brand B showed ash figures just outside the B.P. limit. A trace of iron (0.25 to 0.75 parts per million) was present in all the samples.

The appearance of the products was as follows:—

Brand A (German).—Vivid almost bluish white and shining large flat crystals.

Brand B (British).—White granular powder.

Brand C (British, new).—Small white crystals.

Brand D (American).—Finely crystalline white powder.

Brand E (French).—Finely crystalline powder with faint brownish-yellow tinge.

On moistening with a drop of water, brands A and C remained colourless, but B and D showed a very slight yellowish-brown tinge, which was more marked in E. In 2 per cent. aqueous solution brand A gave an alkalinity 0.3  $pH$  in excess of other brands, and the belief in the superiority of brand A is otherwise without foundation.

TABLE II

Brand	Moisture per cent.	Ash per cent.	Melting-point °C.
A	0.05	0.01	154.5-155.0
B	nil	0.12	154.5-155.0
C	0.15	0.01	154.5-155.0
D	0.01	—	154.5-155.0
E	nil	0.01	154.5-155.0

(From the Department of Pharmacy, Manchester University.)

## DISCUSSION

MR. GARTSIDE raised the question of iron in the procaine itself and suggested that ferric iron had a great deal to do with the decomposition of acid solutions of procaine with adrenaline. When the iron is reduced to the ferrous condition the solution does not decompose. He inquired if it is possible to get a stable solution by filling the ampoule with an inert gas, and he thought such procedure would be preferable to that of dry salts. There were also difficulties in commercial practice in the filling of powders into ampoules. The use of Fisher's ampoule was impossible commercially owing to cost.

MR. DAVIS inquired if anaesthetists could appreciate the difference between solutions with different  $pH$  values. A solution of  $pH$  6 keeps indefinitely. He suggested the use of sodium sulphate as a preservative.

MR. R. R. BENNETT called attention to the work of Professor Walter Dixon, who showed that the ideal acid for combination with anaesthetic bases were boric acid.

MR. BERRY characterised Dr. Bullock's research as very valuable work. The procaine question was complicated when adrenaline was present. The maximum  $pH$  for stability is  $pH$  4 and above that there is a rapid drop. He considered it dangerous for the chemist to dispense dry procaine for a cerebro-spinal-fluid solution injection.

DR. HAMPSHIRE said sterilisation of solutions was much in the minds of the Pharmacopœia Commission, and this kind of paper was most valuable. He hoped that materials of guaranteed stability would become available for pharmacists.

MR. GARTSIDE said stable solutions can be prepared at 5.5 if free from air and by use of carbon dioxide and nitrogen.

DR. BULLOCK said he had only found traces of iron, say one part in two million, but had not investigated decomposition in the presence of iron. He did not consider feasible a neutral solution with inert gas. He did not advocate the Fisher ampoule. If pharmacologists find alkaline solutions better, then trouble or cost does not enter into the matter. The manufacturer should be able to place on the market sterile products which the pharmacist can use and keep sterile. He had no experience with cerebro-spinal-fluid solutions.



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Tuesday Afternoon

The first paper read at the afternoon session was:—

## Assay of Mercuric-Nitrate Ointment

By G. J. W. FERREY

[ABSTRACT]

SAPONIFICATION of strong ointment of mercuric nitrate by aqueous alcoholic potash gives results consistently higher than the B.P. assay modified by titration of mercury with thiocyanate.

The method is recommended to replace the official assay on the grounds of rapidity, convenience and accuracy. It is a modification of Heading's original process with refluxing to avoid loss of mercury by volatilisation and incomplete saponification. Comparative assays of four commercial samples gave the following results:—

Per Cent. of Mercuric Nitrate in Commercial Samples of Strong Ointment of Mercuric Nitrate

Method of Assay	Sample No.			
	1	2	3	6
Heading ... ..	6.00	6.53	—	—
B.P. (modified) ... ..	6.83	6.84	6.72	6.71
New method ... ..	6.89	—	6.92	6.91

The recommended method of assay is as follows:—

Weigh out about 2 gm. of the well mixed ointment into a 250-ml conical flask, add 10 gm. of potassium hydroxide pellets, 2 gm. of zinc dust, 10 mls of water and 10 to 20 mls of industrial methylated spirit, and fit the flask to a reflux condenser of the usual Liebig type. Boil the mixture over a very small flame for fifteen minutes and cautiously add down the condenser tube a mixture of 3 mls of solution of formaldehyde and 50 mls of water. Raise the solution just to boiling and remove the flame. Filter off the hot soap solution through a paper pulp filter in a Gooch crucible, using suction, wash the amalgam with water by decantation, transfer the wad of paper pulp to the flask, which is then re-fitted to the condenser. Pour down the condenser tube 20 mls of water, followed gradually by 20 mls of nitric acid. Wash the tube with a little water, remove the flask from the condenser and dissolve the mercury by gently boiling. Transfer any traces of metal adhering to the Gooch crucible to the flask by means of a few drops of nitric acid. Remove the greater part of the nitrous fumes by heat, cool the solution thoroughly, oxidise with permanganate, and decolorise with a drop of solution of hydrogen peroxide. Titrate with N/10 thiocyanate, using ferric ammonium sulphate solution as indicator.

(From the analytical laboratory of James Woolley, Sons & Co., Ltd.)

## DISCUSSION

MR. POWELL asked if this method was applicable to the weak ointment of the Pharmacopœia.

MR. FERREY replied that he had tried the method on the weaker ointment, but so far results were unsuccessful owing to interference of fats during filtration. The method, he said, had been tried out successfully on red mercury iodide ointment.

The next paper was:—

## Classification of Fish Liver Oils

By D. C. M. ADAMSON, NORMAN EVERS and WILFRED SMITH

[ABSTRACT]

THE investigation, which is Part VI of an analytical classification of fish liver oils, relates to the iodine value of the unsaponifiable matter therefrom. Cholesterol (iodine value, 67) usually forms the major portion of the unsaponifiable matter, but squalene (iodine value, 371) may be present in considerable quantity in shark-liver oil. Vitamin A (iodine value, 356) may constitute 50 per cent. of the unsaponifiable matter of halibut oil. The determination of unsaponifiable matter must be carried out with every attention to detail by the Society-of-Public-Analysts method, including drying of unsaponifiable residue in a current of oxygen-free nitrogen and deducting a blank test on the alcoholic potassium hydroxide used. The

results show that the range of values for the unsaponifiable matter of medicinal cod-liver oils is from 100 to 136. Oils from individual species of the *Gadidæ* family (cod, coal-fish, ling, haddock, hake and whiting) also have values lying within this range. Oils from the order *Elasmobranchii* (sharks, rays, skates and dog-fish) generally give lower values, except such shark-liver oils as contain notable amounts of squalene. The liver oils from miscellaneous fish other than *Gadidæ* and *Elasmobranchii* have a wide range of values from 82 to 176, with tunny attaining 313.

It is considered that the iodine value is of little use in detecting the presence of shark-liver oil in cod-liver oil. It may serve as a useful supplementary analytical characteristic, but a high percentage of unsaponifiable matter is a more reliable indication of adulteration with shark-liver oil.

## DISCUSSION

MR. GARTSIDE said that it was interesting to note in passing that the unsaponifiable matter obtained in the preparation of sodium morrhuate had shown high iodine values.

Replying to a question on the iodine value of potassium hydroxide extracts of these oils, MR. EVERS said that he had carried out some estimations in this connexion, and had found that these values were only small.

In reply to a question by MR. DEANE, MR. EVERS said that most of the English oil produced nowadays was made on the trawler, and it was not certain how many varieties of livers were used. In regard to Norwegian oils, however, a good proportion of the livers were from members of the *Gadidæ*.

The next paper was:—

## Thalleioquin Test for Cinchona

By R. E. WAGG

[ABSTRACT]

THE thalleioquin reaction is not specific for quinine as quinine also responds to this test. The application of the thalleioquin reaction as a quantitative test for cinchona depends upon the proportion of quinine being high (over 30 to 1) in stem bark and low (below 6 to 1) in root bark of cinchona. Experiments on the sensitivity of the thalleioquin reaction shows that excess of bromine relative to the amount of alkaloid must be avoided and that the test solution must be neutral (any excess of ammonia being removed by boiling). The method for extraction of alkaloids from cinchona bark is given as follows:—

Mix 2 gm. of the powdered bark, 1 gm. of calcium hydroxide and 5 mls water to form a homogeneous paste, set aside for five minutes and then evaporate to dryness on a water bath. To the residue add 20 mls alcohol (95 per cent.) and warm on a water bath for five minutes, keeping the dish covered by a watch glass to prevent excessive loss of alcohol and stir three times in the course of the five minutes. Filter, wash the residue with two quantities of 5 mls of warm alcohol and add the washings to the main bulk of the liquid. Evaporate the filtrate to dryness and treat the residue with 5 mls of sulphuric acid (5 per cent. v/v). Filter and neutralise the filtrate exactly as follows:—Add ammonia solution (10 per cent.) drop by drop to 3 mls of filtered acid solution until it becomes slightly cloudy. Excess of ammonia is then expelled by boiling and the solution made up (after cooling) to 6 mls with water.

The best results were obtained on a cinchona bark complying with Pharmacopœial requirements by using 1 ml of the above extract and adding 1 ml of bromine reagent and 2 mls of ammonia solution (10 per cent.). The bromine reagent must be prepared freshly as a 20 per cent. dilution of saturated bromine water. The thalleioquin reaction gives a green colour with 0.04 to 0.2 per cent. of quinine hydrochloride, and a green precipitate above 0.3 per cent. Cinchona bark containing 0.5 per cent. of quinine gave a positive result but was negative with 0.1 per cent. (From the pharmacognosy research laboratory of the Pharmaceutical Society.)

## DISCUSSION

MR. BERNARD HOWARD drew a comparison between the method outlined and the older methods of recognising cinchona bark from external characters. He thought that the sample



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referred to in the paper, which contained 4 per cent. of quinine and only a trace of quinine, was to be regarded as a rarity, and he suggested that it was the only sample in existence showing such figures.

Mr. CORFIELD asked how the test could be applied, and if it could be adopted in the official monogram. If so, he considered the author was going a little too far, as he believed that the microscopical tests available were sufficient to identify the bark from substitutes. In his opinion the test seemed redundant.

In his reply to the two last speakers, Mr. WAGG pointed out that the test gave an indication of the total alkaloids in the bark, and hence was of great commercial importance. In this respect it offered considerable advantages over other methods of identification.

Mr. RUTHERFORD HILL, congratulating Mr. Wagg on his paper, pointed out that this was the author's first contribution to the Conference, and he hoped that some of the remarks passed by those who took part in the discussion would serve as an encouragement to him in the future.

The next paper taken was:—

## Improved Method of Determining Cinchona Alkaloids

By NOEL L. ALLPORT and DAVID FRIEND

[ABSTRACT]

THE "Continental" assay of total alkaloids in cinchona bark, using hot dilute hydrochloric acid in preliminary treatment, gives an alkaloidal residue of very dark colour, which obscures the end point during titration. The B.P. process (trituration powdered bark with lead subacetate solution and extracting with ammoniated alcohol) is better but extremely tedious, and in practice takes three or four days to complete. Experiments using alternating extraction with alcoholic alkali and acid were remarkable in extracting the alkaloids in a fraction of time required for either separately. The best results were obtained by supplementing the Pharmacopœial extractor with a constant-head device delivering 1.5 mls of alcohol-acid solution in exactly five minutes. The acidic alcohol is made by dilution, 12 mls of hydrochloric acid (36 per cent. w/w HCl) to 50 mls with 95 per cent. alcohol. (The method was described.)

The change from alkalinity to acidity probably occurs after half the extraction period has elapsed. The results of comparative assays of cinchona are included in Table I, and it is significant that the B.P. assay shows usually a higher percentage of total alkaloids by weight, but the opposite holds by titration.

TABLE I.

Comparison of Results Obtained in the Determination of Total Alkaloids by the B.P. Method and by the Proposed Method

Sample	Variety	Total alkaloids by weight		Total alkaloids by titration (factor = mls N/10 acid $\times$ 0.0309)		Proportion of true alkaloid in the alkaloidal extract (factor = mls N/10 acid $\times$ 0.0309)	
		B.P. method per cent.	Proposed method per cent.	B.P. method per cent.	Proposed method per cent.	B.P. method per cent.	Proposed method per cent.
A	Succirubra ...	6.91	7.02	6.22	6.68	89.9	95.2
B	Calisaya ...	7.98	7.66	7.66	7.31	96.0	95.6
C	Succirubra ...	6.53	6.32	5.87	6.21	90.5	98.3
D	Calisaya ...	7.91	7.84	7.29	7.40	92.2	94.4
E	Succirubra ...	8.21	7.80	7.55	7.60	92.2	97.5
F	"Pale Bark" ...	2.88	2.84	2.82	2.84	98.0	100.0
G	Succirubra ...	7.29	7.30	6.80	7.23	93.3	99.2
H	Succirubra ...	7.65	7.10	6.72	6.80	87.7	96.0
I	Calisaya ...	8.84	8.62	8.13	8.65	91.9	100.4
J	Calisaya ...	7.12	7.06	6.55	6.89	92.0	97.7
K	Succirubra ...	7.86	7.78	7.38	7.63	94.1	98.2
L	Calisaya ...	6.91	6.78	6.49	6.57	93.5	97.0

The new method did not change the composition of the total alkaloids extracted, determination of the proportions of quinine and cinchonidine showing close agreement with those naturally present in the cinchona bark. (From the laboratories of The British Drug Houses, Ltd.)

## DISCUSSION

Mr. BERNARD HOWARD raised the question as to whether

in total time there was any saving by this method compared with that of the B.P.

Mr. N. EVERS said he had tried the authors' process, and what the latter say of the B.P. process is true, but it also applies to theirs. He had trouble with emulsions and found the time required to be no shorter than that for the B.P. method.

Mr. CORFIELD had also tried out the authors' process. He did not agree that the B.P. method is tedious or required three or four days to complete. Mr. Corfield thought it unfortunate that the authors had described theirs as an improved method, and those who tried it would return to the B.P. process, supported in addition by the question of time. After discussing the B.P. method, of which he and Mr. Self were the originators, Mr. Corfield said the time required for the B.P. process is six hours, followed by an hour and a half for the alkaloid to dry. He thought that starting from receipt of the bark the whole process up to the final result could be completed in a day and a half. By the authors' method results could not be available much sooner, and there were disadvantages in some respects. The authors were satisfied their process gave lower results than the official method because the alkaloids were purer, but he thought the lower result was due to loss. Summing up, he said the authors' method gave results 5 per cent. too low, and there was no appreciable saving of time.

Mr. ALLPORT, in dealing with the points raised, said the process required seven hours plus the time for drying. The B.P. method, in their hands, does take much longer.

The final paper read at the afternoon session was on:—

## Assay of Mersalylum, B.P.

By C. E. WATERHOUSE

[ABSTRACT]

MERSALYLUM, described in the Addendum, 1936, to the B.P., 1932, was introduced from Germany under the name of Salyrgan. The new name is apparently little used at present. A new volumetric process is introduced for the determination of mercury, and it is suggested that this should replace the tedious official gravimetric method. The formation of metallic mercury from mersalylum by treatment with formic acid is applied in assay of mercury content as follows:—

About 0.75 gm. of sample is dissolved in 5 mls of water, and 5 mls of 90-per-cent. formic acid is then added. The mixture is boiled on a water bath under a reflux condenser for three hours. The condenser is washed down with warm water (to obviate loss of free acid in later determination thereof) and the mercury is filtered off at the pump, preferably through a sintered glass G 4p filter, and washed with water. The receiver is changed (the filtrate being retained for extraction of free acid) and the mercury dissolved in nitric acid, risk of loss by splashing being avoided by covering with a clock glass, which is later rinsed with water. Care must be taken to obtain the whole of the mercury in solution, the first run-through of nitric acid being followed by water and then by a further quantity of nitric acid. Solution of potassium permanganate is added until the pink colour persists; this is decolorised with ferrous sulphate solution. Titration is effected with N/10 solution of ammonium thiocyanate using 3 mls of 10-per-cent. ferric alum solution as indicator.

The ammonium thiocyanate solution should be standardised against mercuric oxide or mercury dissolved in nitric acid and treated with potassium permanganate solution as above.

Experiments on extraction of the free salicylallylamide-*o*-acetic acid from the filtrate (see above) showed that some ten extractions were required with chloroform. The acid was more soluble in ether, but this extracts almost the whole of the formic acid, and the following method was adopted to overcome this interference with direct titration of acid:—

The filtrate from the mercury assay is shaken out with six successive quantities of ether, the ether solutions being washed with the same 10 mls of water. After removal of ether, the formic acid in the residue is driven off by heating on a boiling water bath. The residue is dried in an oven at 60° C. and finally *in vacuo* over sulphuric acid to constant weight.

The mean value for the mercury content of the sample assayed was 39.75 per cent., taking results from refluxing over two hours (against official standard of 38.5 to 40.5 per cent. Hg.). Free acid assayed 46.91 per cent., as compared with the theoretical 46.69 per cent.

There was no discussion, and the meeting was adjourned until Thursday, September 15.



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## Social Side

**EARLY ARRIVALS.**—Among the first Conference visitors to arrive in Edinburgh were the vice-president of the Pharmaceutical Society (Mr. Walter Deacon) and Mrs. Deacon, Mr. and Mrs. C. A. Noble, Mr. and Mrs. William Chalmers, and Mr. and Mrs. Irvine, all of whom turned up on September 9. On the Saturday there was a big influx, and at the Conference headquarters hotel were seen Dr. and Mrs. Crossley Holland, Mr. and Mrs. F. A. Lawman, Mr. John Keall, Mr. and Mrs. Harold Deane, Mr. and Mrs. H. N. Linstead, and Mr. and Mrs. Fred Storey. By Sunday the streets of Edinburgh were well sprinkled with representatives of pharmacy.

**RECEPTION.**—The first evening of the Conference was occupied by a reception by the Lord Provost (Sir Louis Gumley, LL.D.), the magistrates and Council of the City of Edinburgh. This was held at the Assembly Rooms, the presentation of over 700 guests providing a colourful spectacle. After receiving the visitors the Lord Provost welcomed the Conference on behalf of the Council, and Mr. Rutherford Hill replied.

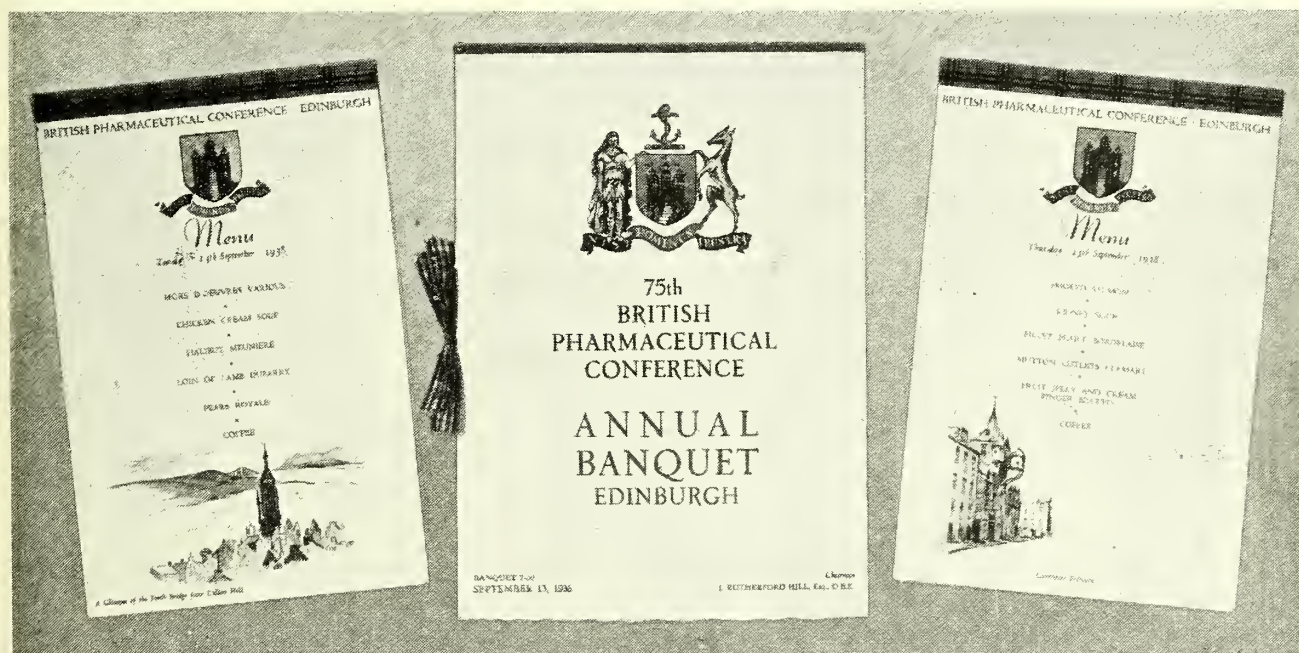
## Banquet

**AMONG THOSE PRESENT.**—The annual banquet of the Conference was held in the Assembly Hall on September 13 under the chairmanship of Mr. J. Rutherford Hill. Among a distinguished gathering numbering over 700 were the chairman of the Edinburgh Insurance Committee (Mr. Thomas J. Addy, O.B.E.), the Regius Professor of Chemistry of the University of Glasgow (Dr. George Barger, M.A., F.R.S.), the Scottish medical secretary of the British Medical Association (Dr. R. W. Craig), the president of the Royal College of Physicians of Edinburgh (Dr. Alexander Goodall), the Medical Officer of Health for Edinburgh (Dr. John Guy), the dean of the Edinburgh Dental Hospital and School (Dr. A. C. W. Hutchinson, F.R.S.E.), the principal of the Royal (Dick) Veterinary College (Colonel Sir Arthur Oliver), the dean of the School of Medicine of the Royal Colleges of Edinburgh (Dr. John Orr), the principal of the Heriot Watt College (Mr. J. C. Smail, O.B.E.), and the Emeritus Professor of Materia Medica and Therapeutics, University of Glasgow (Dr. Stockman).

**TOASTS.**—Following the loyal toasts Mr. H. N. Linstead, O.B.E., registrar of the Pharmaceutical Society, in a witty speech proposed "The City of Edinburgh." The Lord Provost replied. The next toast, that of "The Pharmaceutical Society," was proposed by the President of the Royal

College of Surgeons (Mr. W. J. Stuart, M.A., M.B.). Mr. Guthrie, in his reply, said: The privilege of responding—as president of the Pharmaceutical Society—to this toast is one which rarely falls to a Scotsman. But, whoever may be the head of the Society, there are no more loyal members than the Scottish. There are 24,000 members. It is one of the Society's duties to see that no person shall keep a chemist's shop unless he has satisfied not only our governing body, but also the Privy Council, as representing his Majesty's Government, that he has been well trained in the art of pharmacy. Ever since it was laid down as a guiding principle at the founders' meeting in 1841 that education was the basis of efficiency, that education was the very root of progress, the generations which have followed—one generation of pharmacists after another—have been mindful of that precept. And so to-day we have in this country an educational system which is not surpassed in any other country. Yet what do we find in this hurly-burly of civilisation? We find one drug-selling shop to every forty inhabited houses; we find medicines sold in the market places and hawked from door to door. I am even told—I cannot speak from personal experience—that packed drugs are displayed in public-houses. These things should not be. I welcome the efforts of the municipality of Glasgow in the interests of the people: as you will remember, they have petitioned the Minister of Health to stop this unrestricted traffic in drugs. Sir, I am going to say—with great respect and as your humble servant—it would be a great day if this city, which has received this Conference so graciously and with such a real Scottish welcome, would endorse that petition.

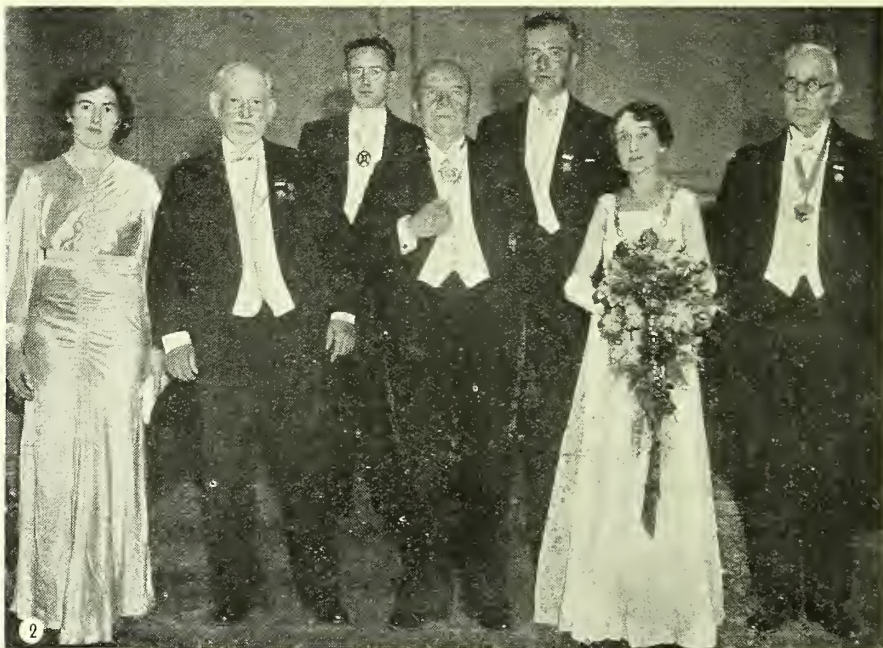
Proposing the toast of the Conference, Professor Sir W. Wright Smith (Regius Keeper, Royal Botanic Garden, and a past member of the Board of Examiners of the Pharmaceutical Society) emphasised the need for raising the standard of instruction for students in pharmacy. He advocated the oral form of examinations, as that gave in many instances the benefit of the doubt to border-line candidates. In his reply to this toast Mr. Rutherford Hill recalled the original objects of the Conference and said that the seventy-five years of its existence had been eminently successful. Dr. J. J. Blackie then proposed the toast of the guests, referring in detail to many of them, and in particular to the Lord Provost. This was responded to by Professor Sydney Smith, dean of the faculty of medicine, University of Edinburgh, who spoke in very appreciative terms of the way in which the guests had been entertained during the evening. The closing speech was made by Sir D'Arcy Wentworth Thompson.



Menu Cards presented by THE CHEMIST AND DRUGGIST



## BRITISH PHARMACEUTICAL CONFERENCE 1938



1. VETERAN.—Mr. D. B. Dott, Edinburgh, who has attended Conferences since 1876, seen with his son.  
2. AT CIVIC RECEPTION.—Mrs. Hickey; Mr. J. R. Hill (Conference chairman); Lord and Lady Provost; Mr. T. Guthrie (president, Pharmaceutical Society); and (at back) Mr. B. P. Hickey (president, Pharmaceutical Society of Ireland) and Dr. J. J. Blackie (chairman, Local Committee).



3. DR. C. H. HAMPSHIRE (secretary, Pharmacopœia Commission) with Mr. A. D. Powell, Nottingham.  
4. Mr. W. Deacon (vice-president, Pharmaceutical Society) with Mrs. Deacon and Mr. A. R. Melhuish.  
5. LADIES' EXCURSION.—Visitors' wives, photographed on steps of Scottish National War Memorial.





## BRITISH PHARMACEUTICAL CONFERENCE 1938



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6. LONDONERS ALL.—Messrs. P. Sparks, Wimbledon; F. G. Wells, Hanwell; (member of Society's Council), and J. Milner, Greenwich, on arrival at Music Hall, Edinburgh.

7. LIVERPOOL WELSH.—Mr. and Mrs. H. Humphreys Jones arriving at Music Hall for one of the sessions.

8. WHOLESALE AND RETAIL.—Mr. Arthur Mortimer, London, with Messrs. J. T. Appleton, Sheffield, and J. Judge, Wakefield.

9 & 10. FROM BELFAST.—Messrs. E. Cleland, W. Beggs, and (at right) J. McDowell, D. Taylor, S. Gibson, C. Abernethy, W. Martin.

11. ARRIVING AT THE CONFERENCE.—Left to right, Mrs. Cordery, Edinburgh; Dr. James Coultts, London; Mr. Herbert Skinner, London; Mr. T. Wilson, Burntisland; Mr. G. Mackie, Edinburgh; Mr. P. Nisbet, Edinburgh; Mrs. and Mr. E. Tylor Reigate.



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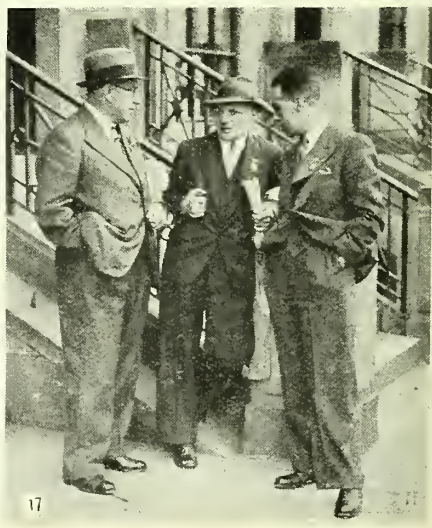
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## BRITISH PHARMACEUTICAL CONFERENCE 1938



12. Messrs. Beggs and Martin, Belfast; Mr. T. and Miss Prior, Stamford; Mr. McDowell, Mr. and Mrs. McGregor, Mr. Cleland, and others. 13. Mr. and Mrs. Beeston, arriving with Mr. and Mrs. Amson, all of Stoke-on-Trent. 14. Messrs. J. Douglas, Peebles; W. Snow, Birkenhead; P. Stiles, Market Harborough; J. Watson, South Queensferry. 15. Messrs. J. Greenstreet, S. Furnival and C. Cross, all of Sheffield, comparing notes. 16. MESSRS. W. S. CULBERT, (chairman, North British Executive), H. Warner, Wolverhampton, R. McCrone, Coatbridge, and C. Warner, Wolverhampton. 17. Messrs. F. Snow, Birkenhead; B. Thomas, Cwmbran; and D. Moncur, Edinburgh.





# Trade Report

Where possible scales of prices of chemicals are given for bulk down to small quantities. Prices recorded for crude drugs, essential and fixed oils and coal tar products are for fair sized wholesale quantities. Qualities of chemicals, drugs, essential and fixed oils, etc., vary, and selected brands or grades would be at higher values

28 Essex Street, W.C.2, September 15

THE world political stress of the past week, which, happily, now seems likely to subside, has had one very pronounced effect on markets. Despite the fact that business continues on a restricted scale, spot values are exceptionally steady. Holders are not anxious to sell their generally limited stocks of imported products, due, partly, to the high cost of replacement and to the possibility of having to pay a special rate of marine insurance to cover "war risks." We deal with this important subject in our editorial columns on p. 292. Actually, consumers have been more inclined to do business this week, and export business in some products to the Baltic and Central European countries has been surprisingly good. The American dollar continues to gain strength against sterling, and this movement is now reflected in the firmer tone in a number of markets. Business in the PHARMACEUTICAL CHEMICALS markets is reported to be moving on a rather better scale, with the general tone steady. VANILLIN continues at the reduction notified last week. ETHYL VANILLIN was reduced to a comparable extent. Home makers of POTASSIUM PERMANGANATE, B.P., have issued a new scale of prices.

## Crude Drugs

General conditions in this market are very steady, due to the uncertain political conditions. Business has been more in evidence, with sellers fully maintaining their quoted prices. AGAR has sold well on spot, chiefly for re-shipment, at full prices; the shipment market is also firm at high figures. The firm tone on spot in CURAÇAO ALOES is fully maintained, with nothing offering for shipment. Shipment prices for BUCHU tend slightly easier. There has been fair arrivals in London this week of new crop CASCARA SAGRADA; prices for all bark are fully steady. Bergen reports that business in the shipment market for Norwegian COD-LIVER OIL remains poor. Actual business in ERGOT has been limited, but spot and forward prices for all descriptions are steady. A better demand for GAMBOGE is reported. Sudan GUM ACACIA remains dull. Mincing Lane reports some good business in Canadian new crop HONEY. MATTO GROSSO IPECACUANHA is fully steady, spot and forward, while business has been slow. Fair business in Japanese MENTHOL, chiefly for parcels afloat; market generally continues steady.

## Essential Oils

Conditions in these markets remain rather depressed, with business moving quietly and on a rather restricted scale. Shipment conditions are tending steadier. ANISE (STAR) has been quiet on spot with some sellers quoting keenly. Expressed ALMOND is quoted cheaper. BERGAMOT is dull and unchanged. CASSIA seems to be unwanted, with some keen quotations noted. Ceylon CITRONELLA is firm and dearer on spot and very short; only distant shipment offers. Fair inquiry for EUCALYPTUS. Sicilian hand-pressed LEMON is reported firm at the source; spot stocks of good oil possibly restricted to a few cwt. and held for full prices. LEMONGRASS continues neglected. Plenty of Orange, French Guinea and other descriptions, available, for which the demand is comparatively negligible. Japanese PEPPERMINT has sold freely on spot at steady prices; shipment market also steady with no near positions quoted.

A drug auction will be held at the Commercial Sale Rooms, Mincing Lane, on Thursday next, September 22.

## Exchange Rates on London

The following is a list of the chief Continental and other exchange rates at the opening on Thursday morning:—

Centre	Quoted	Par	September 8	September 15
Amsterdam ...	Fls. to £	12.107	8.92½	8.92
Berlin ...	Mks. to £	20.43	12.02	11.97
Brussels ...	Belgas to £	nominal	28.60	28.30
Copenhagen ...	Kr. to £	18.159	22.40	22.40
Lisbon ...	Esc. to £	110	110½	110½
Madrid ...	Ptas. to £	25.24½	nominal	nominal
Milan ...	Lire to £	92.46	91½	91½
Montreal ...	Dols. to £	4.86½	4.83	4.82
New York ...	Dols. to £	nominal	4.82	4.79½
Oslo ...	Kr. to £	18.159	19.90	19.90
Paris ...	Fr. to £	124.21	178½	178½
Prague ...	Kr. to £	164.25	139½	139½
Stockholm ...	Kr. to £	18.150	19.40	19.40
Warsaw ...	Zloty to £	43.38	25½	25½
Zurich ...	Frs. to £	25.2115	21.30	21.27

Bank rate 2 per cent.

## Pharmaceutical Chemicals, etc.

RATHER more inquiry is reported for a few products, but the seasonal demand remains below normal. Quoted prices show no change of importance. Vanillin is steady at the reduced prices reported last week.

ASPIRIN (TABLETS).—The following are agreed wholesale prices for the British makers: Under 5,000, 3s. per 1,000; 5,000, 2s. 10d.; 10,000, 2s. 9d.; 25,000, 2s. 7d.; 50,000, 2s. 6d.; 100,000, 2s. 5d.; 250,000, 2s. 4½d.; 500,000, 2s. 4d.; 1,000,000 2s. 3d.; over 1,000,000, 2s. 2d. per thousand tablets. A rebate of 1d. per 1,000 is allowed on orders for 10 million tablets taken over a period of 12 months. For small quantities higher prices would be asked by wholesale distributors.

BARBITONE.—Slack market, unsteady: two cwt., 8s. 11d.; 56 lb., 9s. 2d.; less than 56 lb., 9s. 5d. per lb., ex store.

BENZOIC ACID (B.P.).—Makers' prices are unchanged: five cwt., 1s. 7½d.; one cwt., 1s. 8d.; smaller parcels, from 1s. 9d. up to 2s. 2d. per lb., as to quantity.

BORAX (B.P.).—Makers' prices steady: granulated, £24; crystals, £25; powdered, £25 10s.; extra fine powder, £26 per ton, in one-cwt. bags, carriage paid buyers' works for minimum 1-ton lots. Extra for small quantities. Commercial quality, £8 per ton less for all descriptions.

BORIC ACID (B.P.).—Makers' prices continue steady: granulated, £36 10s.; crystals, £37 10s.; powder, £38 10s.; extra fine powder, £40 10s. per ton, in 1-cwt. bags, carriage paid to buyers' works on 1-ton minimum. Commercial quality, £8 per ton cheaper for all descriptions.

BROMIDES.—Makers' scales of prices steady. POTASSIUM B.P., five cwt., 1s. 8d.; one cwt., 1s. 9d.; 28 lb., 2s. per lb. SODIUM B.P., five cwt., 1s. 10d.; one cwt., 1s. 11d.; 28 lb., 2s. 2d. per lb. AMMONIUM B.P., five cwt., 1s. 11d.; one cwt., 2s.; 28 lb., 2s. 3d. per lb. net. Resale clause applies. 28-lb. parcels and one-cwt. cases free. Smaller quantities than 28 lb. at higher prices. Export quotations are maintained as follows: POTASSIUM B.P., five cwt., 1s. 4d.; one cwt., 1s. 4½d. SODIUM B.P., five cwt., 1s. 5d.; one cwt., 1s. 5½d. AMMONIUM B.P., five cwt., 1s. 6½d.; one cwt., 1s. 7d. per lb., f.o.b.

BUTYL CHLORAL HYDRATE.—Steady, quiet: spot, 14 lb., 8s.; 7 lb., 8s. 3d.; 1 lb., 8s. 6d. per lb., in 1-lb. bottles.

CAFFEINE.—The scales for Continental material, duty paid, in 5-lb. tins, are as follows:—Pure alkaloid, two cwt., 8s. 10d.; one cwt., 9s. 0½d.; 56 lb., 9s. 2½d.; less than 56 lb., 9s. 4½d. per lb. Citrate, two cwt., 5s. 11½d.; one cwt., 6s. 0½d.; 56 lb., 6s. 1¼d.; less than 56 lb., 6s. 2¼d. per lb. Soda sal., two cwt., 6s. 2¼d.; one cwt., 6s. 3d.; 56 lb., 6s. 4½d.; less than 56 lb., 6s. 5½d. per lb. English makers' prices as follows: Pure alkaloid, two cwt., 9s.; one cwt., 9s. 2d.; 56 lb., 9s. 4d.; less than 56 lb., 9s. 6d. per lb. Citrate, two cwt., 5s. 11d.; one cwt., 6s.; 56 lb., 6s. 1d.; less than 56 lb., 6s. 2d.

CHLORAL HYDRATE.—Steady at makers' prices: duty paid crystals, in 14-lb. free containers, five cwt., 3s. 2d.; one cwt., 3s. 3d.; 28 lb., 3s. 4d. per lb.; 28-lb. jars one penny per lb. extra.

CITRATES.—Makers' prices for POTASSIUM CITRATE are as follows:—

	1 lb. bts. or tins	2 lb. bts. or tins	4 lb. bts. or tins	7 lb. bts., tins or jars	14 lb. bts., tins or jars	28 lb. tins free
Under 4 lb. ...	s. d. 2 2	s. d. 2 0½	s. d. —	s. d. —	s. d. —	s. d. —
4 lb. and under 7 lb. ...	2 1	1 11½	1 11½	—	—	—
7 lb. " " 14 lb. ...	2 0	1 10½	1 10½	1 9½	—	—
14 lb. " " 28 lb. ...	1 11	1 9½	1 9½	1 8½	1 8½	—
28 lb. " " 1 cwt. ...	1 10	1 8½	1 8½	1 7½	1 7½	1 7
1 cwt. ...	1 8	1 6½	1 6½	1 5½	1 5½	1 5

CITRIC ACID (B.P. CRYSTALS).—Market has been quiet; British material quoted at 1s. 0½d. per lb., less 5 per cent. discount, nominal and without engagement. Dealers' prices for imported material are competitive.

CREAM OF TARTAR.—Quoted unchanged: British material, 99 to 100 per cent., 92s. per cwt., less 2½ per cent. discount. Dealers' prices for foreign material competitive.

CREOSOTE (B.P.).—Business remains quiet: bulk quantities, in 25-kilo demijohns, about 1s. 6d.; small parcels, 1s. 7½d. up to 2s. per lb., ex store.

EPHEDRINE.—Inquiry continues on a good scale, with home makers quoting hydrochloride, B.P., from 6s. per oz. for minimum 1,000



lots and up to 7s. for small parcels. Pure, alkaloid, quoted from 7s. 9d. to 8s. 6d. per oz., as to quantity.

GALLIC ACID.—Steady on quotation, business quiet: one cwt., 3s.; 56 lb., 3s. 1d.; smaller parcels, up to 3s. 6d. per lb.

GLYCERIN (B.P.).—Makers' scale of prices for all quantities continue at the recent reduction. The scales are as follows:—

PRICE PER CWT.

Contracts or Spot Lots of	Under 1 cwt.	1 cwt. and under 2½ cwt.	2½ cwt. and under 5 cwt.	5 cwt. and under 10 cwt.	10 cwt. and under 20 cwt.
Minimum deliveries off contract of	—	1 cwt.	1 cwt.	1 cwt.	2 cwt.
Tins, 14 lb. each ... per cwt.	97/6	93/-	92/-	89/-	88/-
Tins, 28 lb. " ... "	94/6	90/6	89/6	86/6	85/6
Tins, 56 lb. " ... "	91/6	88/-	87/-	84/-	83/-
Drums, 1 cwt. (charged 20/-) ... "	—	83/6	82/6	79/6	78/6
Drums, 2½ cwt. ( " 60/-) ... "	—	—	80/6	77/6	76/6
Drums, 5 cwt. ( " 75/-) ... "	—	—	—	77/-	76/-
Drums, 10 cwt. ( " 100/-) ... "	—	—	—	—	75/6
Extra per cwt. for smaller deliveries—ex contract than as above specified	5 cwt. and under 10 cwt. ...	2 cwt. and under 5 cwt. ...	1 cwt. and under 2 cwt. ...	Under 1 cwt. ...	—
	—	—	—	—	6d.
	—	1/-	1/-	1/-	1/6

Refined Pale Straw Industrial Glycerin, 1.260 S.G. 5/- per cwt. less than chemically pure.

GUAIACOL CARBONATE.—Dealers' prices are unchanged: 8s. 10d. per lb., bulk quantities at slightly cheaper prices.

GUAIACOL (CRYSTALS).—Market is dull: 9s. 10d. per lb. in 14-lb. jars; 9s. 10½d. in 7-lb. bottles; 10s. 3½d. per lb. in 1-lb. bottles.

HEXAMINE.—Makers' prices for bulk quantities keen: B.P. powder, about 1s. 1½d.; free-running crystals, from 1s. 3d. to 1s. 6d. per lb., carriage paid, for bulk lots. Dealers quote: free-running crystals, 1s. 4d. for quantities of one cwt. and over; 1s. 8d. for 14-lb. lots, and up to 2s. for smaller parcels, carriage paid.

IODIDES.—Makers' prices for salts steady. POTASSIUM, B.P.—Not less than 1 cwt., 5s. 3d.; not less than 28 lb., 5s. 6d.; not less than 14 lb., 5s. 9d.; not less than 7 lb., 6s. 3d.; not less than 4 lb., 6s. 9d.; smaller quantities, 7s. 3d. per lb. SODIUM, B.P.—Not less than 28 lb., 6s. 6d.; not less than 14 lb., 6s. 10d.; not less than 7 lb., 7s. 4d.; not less than 4 lb., 8s.; smaller quantities, 8s. 10d. per lb. IODINE, B.P., RESUBLIMED.—Not less than 1 cwt., 5s. 9d.; not less than 28 lb., 6s.; not less than 14 lb., 6s. 3d.; not less than 7 lb., 6s. 9d.; not less than 4 lb., 7s. 5d.; smaller quantities, 8s. 2d. per lb.

IODOFORM, B.P., CRYST., PRECIP. or POWDER.—Not less than 28 lb., 8s. 3d.; not less than 14 lb., 8s. 7d.; not less than 7 lb., 9s. 3d.; not less than 4 lb., 10s. 1d.; smaller quantities, 10s. 11d. per lb. Contracts for 1 cwt. and upwards (assorted if required), with fall clause, for delivery as required during four months. 28-lb. tins and 1-cwt. cases free. All bottles are charged, but will be credited in full if returned, carriage paid, in good condition within three months. Carriage paid on any quantity. It is a condition of sale that buyers undertake not to resell any quantity of the above products at prices below the scale for any such quantity current at the time the sale is made.

LACTIC ACID (B.P.).—Remains rather quiet: quantities, in carboys, 1s. 4½d. to 1s. 5½d.; in winchesters and bottles, 1s. 6d. up to 2s. per lb., as to quantity.

MERCURIALS.—Makers' prices are at the levels shown in the table below; terms, net, without engagement. Special prices obtain for larger quantities and contracts, and bulk prices hold for assorted salts.

	Less than 28 lb.	Not less than 28 lb.	Not less than 112 lb.
Ammoniated Lump B.P. (White Precip.) ...	s. d.	s. d.	s. d.
" Powder B.P. ...	5 10	5 6	5 5
Bichloride Lump B.P. (Corros. Sub.) ...	6 0	5 8	5 7
" Powder B.P. ...	5 1	4 9	4 8
Chloride B.P. Calomel ...	4 9	4 5	4 4
Red Oxide Cryst. B.P.C. (Red. Precip.) ...	5 10	5 6	5 5
" Levig. B.P.C. ...	6 11	6 7	6 6
Yellow Oxide B.P. ...	6 5	6 1	6 0
Persulphate White ...	6 3	5 11	5 10
Sulphide Black (Hyd. Sulph. cum. Sulph. 50%) ...	6 0	5 8	5 7
	5 11	5 7	5 6

METHYL SALICYLATE.—Demand is limited, quoted unchanged: spot, ten cwt., 1s. 1½d.; five cwt., 1s. 2d.; one cwt., 1s. 2½d.; less than one cwt., 1s. 3d.; small quantities, in bottles, up to 2s. per lb.

METHYL SULPHONAL.—Market is slack and unsteady: two cwt., 19s. 9½d.; one cwt., 19s. 9½d.; 56 lb., 20s. 2½d.; small parcels, up to 20s. 8d. per lb.

PARAFORMALDEHYDE.—Quiet demand, market keen: 100 per cent. powder, bulk quantities in kegs, about 1s.; smaller parcels, up to 1s. 4½d. per lb., as to quantity.

PARALDEHYDE.—Market quoted unchanged and quiet: in carboys, 1s. 2d.; in winchesters, 1s. 5d. to 1s. 6d.; in bottles, 1s. 7½d. to 1s. 10½d. per lb., ex store.

PHENACETIN.—Continues steady, business quiet: crystals or powder, bulk quantities, from 2s. 6d.; smaller parcels, 2s. 7d. up to 3s. per lb., as to quantity.

PHENAZONE.—Dull and unsteady: crystals, five cwt., 6s. 9½d.; two cwt., 7s.; one cwt., 7s. 3d.; and less, up to 7s. 6d. per lb., with powder 2½d. per lb. extra.

PHENOLPHTHALEIN.—Quoted prices are unchanged: two cwt., 2s. 9d.; one cwt., 2s. 10d.; 28 lb., 3s.; 14 lb., 3s. 1d.; 7 lb., 3s. 2d.; smaller parcels, up to 3s. 6d. per lb.

PHENYLETHYLBARBITURIC ACID.—Small parcels, in 2-lb. bottles, are quoted at about 17s. 9d. to 18s. 6d. per lb., as to quantity.

PHOTOGRAPHIC CHEMICALS.—Home makers' prices are as follows: AMIDOL.—28 lb., 8s.; 14 lb., 8s. 9d.; 7 lb., 9s. 6d., in free 7-lb. tins; under 7 lb., 12s. per lb., in free 1-lb. bottles. CHLORQUINOL.—1-lb. bottles, 21s. per lb. GLYCIN.—7 lb., 10s. 6d.; 1-lb. bottles, 13s. 6d. per lb. HYDROQUINONE.—56 lb., 4s. 10½d.; 28 lb., 5s.; 14 lb., 5s. 3d.; 7 lb., 5s. 6d.; in 1-lb. bottles, 6s. 6d. per lb. METOL.—28 lb., 9s. 6d.; 14 lb., 9s. 9d.; 7 lb., 10s. 6d., tins free; 3 lb., 12s., bottles free; 1-lb. bottles, 12s. 6d. per lb., bottles free. ALUM (PHOTOGRAPHIC QUALITY).—1 cwt., 21s. per cwt.; 28 lb. for 6s. GOLD CHLORIDE.—15-grain tubes, 45s. per doz. MAGNESIUM POWDER.—10s. per lb. PARAMIDOPHENYL HYDROCHLOR.—8s. 6d. per lb., bottles free. POTASSIUM FERRICYANIDE. 14 lb., 2s. 2d.; 7 lb., 2s. 4d.; 1 lb., 2s. 6d. per lb. POTASSIUM METABISULPHITE.—One cwt., 8d.; 28 lb., 9d.; 14 lb., 10d.; 7 lb., 1s. per lb. PYROGALLIC ACID, CRYST.—28 lb., 7s. 3d.; 14 lb., 8s.; 7 lb., 8s. 9d.; under 7 lb., 9s. 3d. per lb. SODIUM (CARBONATE RECRYST.).—5 cwt., 12s. 6d. per cwt.; 1 cwt., 15s. 6d. per cwt.; 56 lb. for 11s. 6d.; 28 lb. for 6s. SODIUM HYPOSULPHITE, CUBES, CRYST.—5 cwt., 17s.; 1 cwt., 19s. 6d. per cwt.; 56 lb. for 11s. 6d.; 28 lb. for 6s. SODIUM SULPHIDE (PURE).—7 lb., 1s. 9d.; 1 lb., 2s. per lb., bottles and jars free. SODIUM SULPHIDE, RECRYST.—One cwt., 21s. 6d. per cwt.; 56 lb. for 13s. 6d.; 28 lb. for 7s.

POTASSIUM PERMANGANATE (B.P.).—British makers have issued a scale of prices for home trade, as follows:—Not less than one cwt., 10½d.; not less than three cwt., 10d., in drums; not less than five cwt., 9½d. in 1-cwt. drums and 9½d. in 5-cwt. drums, net, delivered buyer's station, drums free. Technical or commercial quality, one cwt., 96s.; three cwt., 91s. 6d.; five cwt., 89s.; one ton, 86s. 6d. per cwt., in 1-cwt. drums.

POTASSIUM SULPHOGUAIACOLATE.—Remains dull: quoted at about 6s. 1d. to 6s. 6d. per lb., as to quantity.

QUININE SALTS.—Convention prices continue unchanged: sulphate, 2s. 2d.; bisulphate, 2s. 2d.; ethyl carbonate, 2s. 9½d.; salicylate, 2s. 10½d.; hydrochloride, 2s. 8½d.; dihydrochloride, 3s.; hydrobromide, 2s. 8½d.; dihydrobromide, 3s.; valerianate, 3s. 8d.; hydrophosphite, 4s.; alkaloid, 3s. 9d. per oz., carriage paid on bulk quantities; 100-oz. tins free, smaller packages extra.

RESORCIN.—Makers' home trade prices are unchanged: crystals, one cwt., 5s. 5d.; 56 lb., 5s. 6d.; 28 lb., 5s. 7d.; 14 lb., 5s. 9d.; 7 lb., 6s.; smaller quantities, up to 7s. per lb.

ROCHELLE SALTS.—Makers' prices are steady:—

	Pulv. Sod. Pot. Tart. B.P.	Pulv. Seidlitz.	Double Seidlitz
	Per cwt. s. d.	Per cwt. s. d.	Per cwt. s. d.
Under 1 cwt. ...	85 0	68 0	76 5
Under 5 cwt. ...	82 6	66 3	73 3
Over 5 cwt. in one delivery ...	80 0	64 3	71 0

Soda, pot. tart. cryst. at 2s. 6d. per cwt. extra to powder, net, 14 days. Special prices for quantities. Contracts accepted subject to a rise and fall clause.

SACCHARIN.—Convention price for 550 is 37s. 6d. per lb., duty paid, with rebates for quantities.

SALICYLIC ACID (B.P.).—Makers' scale of prices steady, not much business: five cwt., 1s. 7d.; one cwt., 1s. 7½d.; 28 lb., 1s. 10d.; 14 lb., 1s. 11½d.; 7 lb., 2s. 0½d.; 4 lb., 2s. 2½d. per lb.

SODIUM SALICYLATE (B.P.).—Makers' prices unchanged, demand small: home trade, crystals or powder, five cwt., 1s. 5½d.; one cwt., 1s. 6d.; 28 lb., 1s. 9d.; 14 lb., 1s. 10½d.; 7 lb., 1s. 11½d.; 1 lb., 2s. 4d. per lb.

SULPHONAL.—Market is dull and unsteady: crystals or powder, two cwt., 15s. 5½d.; one cwt., 15s. 10½d.; 56 lb., 16s. 1d.; smaller parcels, up to 16s. 7½d. per lb.

TARTARIC ACID (B.P. CRYSTALS).—Continues steady, fair business: British makers quote at 1s. 1½d. per lb., less 5 per cent. discount, dealers offering foreign materials at competitive prices.

VANILLIN.—Convention prices for home trade continue at the reduced prices recorded last week: ex clove oil or guaiacol, five cwt., 11s.; one cwt., 11s. 1½d.; 56 lb., 11s. 3d.; smaller quantities, up to 11s. 6d. per lb.



**Crude Drugs, etc.**

**ACONITE ROOT.**—Spot supplies of *Napellus* at high figures, with small parcels quoted up to 110s. per cwt., ex store.

**AGAR.**—This market continues fully steady, with quite a good demand from the Continent: spot, Kobe, No. 1, 3s. 3d.; No. 2, 2s. 11d. Yokohama, No. 1, 2s. 10½d. per lb.; shipment, limited quantities of Kobe No. 1 offering, with 2s. 10½d. wanted. Kobe No. 2, 2s. 6½d. to 2s. 7d.; Yokohama No. 1, 2s. 7d. per lb., c.i.f. New crop, January-February, 2s. 10d. to 2s. 11d. per lb., c.i.f., with speculative business reported done at about 2s. 8d. per lb., c.i.f.

**ALKANET ROOT.**—Occasional small spot business, with quotations about 45s. per cwt., ex store.

**ALOES.**—Curaçao continue very firm on spot, with no shipment offers. Other descriptions steady: Cape, spot, 57s. 6d. to 60s.; shipment, easy at 55s. per cwt., c.i.f. Curaçao, spot, from 167s. 6d. to 175s., as to quality; shipment, 150s. upwards per cwt., c.i.f. nominal. Aden, 57s. 6d. per cwt., ex store.

Exports of aloes from the Cape during the period January-June, 1938, totalled 308,751 lb., valued at £6,968, compared with 445,425 lb., valued at £9,631 in the corresponding six months of 1937.

**ANTIMONY.**—Quoted unchanged, market quiet: Chinese, crude, spot, £35; shipment, September-October, £30, c.i.f. English regulus, £70 to £71 per ton, ex store.

**ARNICA FLOWERS.**—Spot supplies in small parcels are quoted at about 1s. 4d. per lb., ex store.

**BALSAMS.**—Business has been of little account: *Tolu*, 1s. 8d.; *Canada*, spot, 2s. 10d.; shipment, 2s. 9d., c.i.f.; *Copaiba*, 1s. 8d.; *Peru*, 4s. 2d. per lb., spot.

**BELLADONNA.**—Spot market dull: leaves, 55s.; root, high test, 55s. per cwt., spot.

**BENZOIN.**—A little spot inquiry received: Siam, medium almonds, £26; bean and pea, £20 per cwt., ex store. Sumatra quoted from 70s. to 90s. per cwt., ex store.

**BUCHU.**—Spot values show little change, with business of a few bales only: spot, rounds, 1s. 5d. to 1s. 7d., as to quality; ovals, 1s. 3½d. to 1s. 5d.; shipment, f.a.q. the season, 1s. 4d., c.i.f., which might be shaded. Old crop leaves on spot at a discount.

Exports from the Cape during the period January-June, 1938, totalled 99,775 lb., valued at £6,031, compared with 170,311 lb., valued at £13,046 in the corresponding six months of 1937.

**BURDOCK ROOT.**—The spot value for cwt. lots or so continues at about 47s. 6d. per cwt., ex store.

**CAMPHOR.**—Sales of a few cases, with prices quite steady: Japanese monopoly BB brand, £7 10s. per 100 lb.; Japanese, natural, spot, tablets, 2s. 6d.; powder, 2s. 3d.; slabs, 2s. 2½d. per lb., ex store; shipment: tablets, 2s. 2d.; powder, 1s. 11½d.; slabs, 1s. 11d. per lb., c.i.f.; English refined flowers, one cwt., 3s. 1d.; 28 lb., 3s. 2d.; small lots, 3s. 3d. per lb. Transparent tablets, 4 oz., 8 oz. and 16 oz., 3s. 4d.; 1 oz. and 2 oz., 3s. 5d.; ½ oz., ½ oz. and ¼ oz., 3s. 6d.

**CANTHARIDES.**—Unchanged and in very little request: Chinese, spot, 2s. to 2s. 2d.; shipment, 1s. 7d. per lb., c.i.f.

**CARDAMOMS.**—Very little business moving: spot, Mangalore seed, 3s. 3d.; shipment, 2s. 9d., c.i.f. Bombay seed, spot, 3s. 4½d. Aleppy greens, spot, about 2s. 6d.; shipment, f.a.q. the season, 2s. per lb., c.i.f.

**CASCARA SAGRADA.**—Fair arrivals of this season's bark reported this week. Market continues fully steady at previous figures, but business remains of small account: 1938 bark firm at 46s. per cwt., c.i.f.; spot, 1938 bark, 52s. 6d.; 1937 bark, 57s. 6d., and 1936 bark, up to 65s. per cwt., ex store, duty paid.

**CHAMOMILES.**—Dealers are quoting new crop, good white flowers, from 150s. to 160s. per cwt., ex store, duty paid.

**CLOVES.**—Business remains quiet, values level on the week: Zanzibar, spot, 8½d.; shipment, September-October, 8½d. per lb., c.i.f. Madagascar, in bond, 7½d.; shipment, October-December, 6½d. per lb., c.i.f.

The landings of Zanzibar in London during the week ended September 10 were *nil* and the deliveries 10, leaving a stock of 964. From January 1 to date the landings of Zanzibar have been 1,904, and the deliveries 1,999. Landings of Madagascar for the week ended September 10 were *nil*, and the deliveries *nil*, leaving a stock of 1,561. From January 1 to date the landings of Madagascar have been 1,465 and the deliveries 1,980 packages.

**COCA BUTTER.**—Market quiet but steady: prime English, 8½d. to 9½d. per lb.; foreign, 8d. to 9d. per lb., as to quantity and quality.

**COCONUT (DESICCATED).**—Values are about steady, business quiet: spot, fine, 16s. 3d.; medium, 16s. 3d. per cwt., shipment, halves, September, 15s.; October-December, 15s. 3d. per cwt., c.i.f.

**COD-LIVER OIL.**—Bergen report indicates shipment business continues slow, with the quotation keeping about steady: finest Lofoten steam-refined non-freezing medicinal oil, 90s. per barrel, c.i.f. London. Small lots, on spot, about 132s. 6d. per barrel, ex store, duty paid. British finest medicinal oil, 115s. per 25-gallon drums, delivered U.K., with rebates for 25 or more drums.

**DANDELION ROOT.**—Good clean imported root is available on spot at about 70s. per cwt., ex store.

**ERGOT.**—Fair amount of inquiry continues but business booked has been small. Market continues steady: Portuguese, spot, 5s. 7½d.;

shipment, new crop, 4s. 6d. to 4s. 7½d., c.i.f. Polish, spot, from 3s. 10½d. to 4s.; shipment, nominal at 3s. 7½d., c.i.f., with very few firm offers at the moment. No Spanish or Russian offering for shipment.

**GAMBOGE.**—Rather more inquiry on spot. We notice the arrival of five cases this week: good Siam pipe quoted at about £13 10s. per cwt., duty paid.

**GENTIAN.**—Steady, with a little business reported: clean French root, 34s. 6d.; shipment, new crop, 28s., c.i.f.; Continental, 33s. 6d. per cwt., ex store, as to quantity.

**GINGER.**—Quoted level on the week, market quiet: West African, spot, 25s.; for arrival, 21s. 6d. per cwt., c.i.f. Jamaican, spot, bold, in barrels, 70s. to 85s.; small grinding, in bags, 45s. to 47s. 6d. per cwt., c.i.f.

**GUM ACACIA.**—Market has been dull and is quoted unchanged: Kordofan, cleaned sorts, spot, 38s. 6d. to 39s.; shipment, 36s. 6d. per cwt., c.i.f.

**HONEY.**—Quite a fair business, mostly in new crop Canadian, reported this week: new crop Jamaican, from 28s. for dark manufacturing to 45s. for pale set; Canadian, bulk quantities, 47s. 6d. to 50s. per cwt., as to quality, ex store. Small quantities, 52s. to 54s.

**HYDRASTIS.**—Market is steady, business quiet: U.S.P., spot, 13s. 3d.; shipment, 13s. per lb. A parcel just arrived, testing 3.14 total alkaloids (London analyses) is held for 14s. 3d. per lb., ex store.

**IPECACUANA.**—Market is very steady, but buyers continue to hold off: Matto Grosso, B.P., spot, 7s. 1½d. to 7s. 4½d., as to seller; shipment, firm at 6s. 10½d. per lb., c.i.f.

**IRISH MOSS.**—Inquiry is small: quoted about 45s. to 60s. per cwt. for small parcels of the best qualities.

**JALAP.**—Dealers' prices are unchanged: 13.3 per cent., 1s. 1d.; 10.5 per cent., 10d. per lb., ex store.

**JUNIPER BERRIES.**—Remains dull and quoted unchanged: good sifted quality on spot at about 25s. per cwt., ex store.

**KOLA NUTS.**—African halves on spot quoted from 2½d. to 3d. per lb., as to quality. St. Lucia halves, about 4d. per lb., for good bright quality.

**LAVENDER FLOWERS.**—New crop, best blue flowers, 150s.; seconds, 125s. per cwt., ex store.

**LIGUORICE.**—Natural root is quoted on spot at about 11s. 6d. per cwt. and decorticated at 30s. to 45s. per cwt.

**MERCURY.**—First-hands quotations are steady at former figures: shipment, 69 dollars per bottle, f.o.b., Continent; spot, £13 18s. to £13 18s. 6d. per bottle, ex store, London.

**NUX VOMICA.**—Cochin, washed and garbled, B.P., spot, 11s.; forward 9s. per cwt., c.i.f.

**OPIMUM.**—More inquiry reported: Turkish, original cases of 170 lb., 13 per cent., 1s. 1d.; Iranian, 12 per cent., 1s. 1d. per unit, landed and duty paid.

**PEPPER.**—Values are fractionally cheaper on the week, business quiet: Lampong, in bond, 2½d.; shipment, October-December, 2½d.; January-March, 2½d., c.i.f. Tellicherry, spot, 4d.; shipment, August-October, 33s., c.i.f. Aleppy, spot, 4d.; shipment, August-October, 33s., c.i.f. White Muntok, in bond, 3½d.; shipment, October-December, 3½d.; January-March, 3½d., c.i.f. London Terminal Market: Black, August, 2½d.; October 2½d.; December, 2½d.; March, 2½d. White, September, 3½d.; October, 3½d.; December, 3½d.; March, 3½d. per lb.

**PIMENTO.**—Quoted dearer, closing firm: spot, 8d. per lb.; shipment, September-October, 63s. 6d. per cwt., c.i.f.

**RHUBARB.**—Steady business continues, mostly in rough round at full prices; no shipment offers of any description: Shensi, spot, unchanged at 4s. 6d. to 5s. for best quality; old, slightly wormy, 3s. 9d. Rough round, spot, 1s. 10d. to 2s. per lb., as to quality.

**RUBBER.**—With publication of the news that the quota was to be continued unchanged at 45 per cent. for the last three months of the year the market advanced, but weakened later: smoked ribbed sheet, spot, 7½d.; September, 7½d.; October, 7½d.; November, 8d.; December, 8d.; January-March, 8½d.; April-June, 8½d.

**SAFFRON.**—Dealers are asking from 90s. to 92s. 6d. per lb. for the small spot stocks of finest Valencia. Inferior material at cheaper prices.

**SEEDS.—ANISE.**—Spot, duty paid, Spanish, 57s. 6d.; Bulgarian, 41s.; Syrian, 42s. 6d. **CANARY.**—Market quiet; prices quoted are spot, duty paid: Mazagan, 16s. 3d.; Morocco, 15s.; Turkish, 14s. 6d.; Plate, 13s. 9d.; Spanish, 22s. 6d. to 35s. **CARAWAY.**—Dutch, spot, 33s. 6d., duty paid, and 28s. 6d., f.o.b. Holland. **CORIANDER.**—Morocco, on spot, is offered at 16s. 6d., duty paid; very little business passing at this figure. For shipment 12s. 9d. to 13s., c.i.f. is quoted. **CUMIN.**—Spot, Malta, 52s. 6d., duty free; Morocco, 47s. 6d., duty paid. **FENUGREEK.**—Morocco old crop, on spot, is 13s. 6d., duty paid, and new crop 12s. 6d., duty paid. **FENNEL.**—Spot, Indian, 22s. 6d. to 27s. 6d.; Iranian, 22s. 6d., in bond. **MUSTARD.**—English, 21s. to 32s. 6d., according to quality.

**SENEGA.**—Not much business moving, but values are keeping steady: spot, 2s.; shipment, 1s. 11d. per lb., c.i.f.

**SENNA.**—Quotations for all descriptions continue steady and unchanged, while business is slow. Supplies of new crop Tinnevely



leaves are expected to arrive in London this week, and holders are quoting as follows: No. 1 at 6d. per lb., No. 2 at 4d.; No. 3 at 2½d., No. 4 at 2½d. per lb., and these prices could be shaded for old crop leaves. Tinnevely pods.—Best pale green hand-picked offer at 5d. to 6d. per lb., with darker descriptions at 3½d. to 4d. per lb. Shipment quotations for Tinnevely leaves continue at the recent advance. Alexandrian hand-picked pods.—The spot market is bare of best palish bold pods, and as no further supplies are expected for some months firm prices are being quoted here. Spot quotations as follows: selected, 5s.; No. 1, 4s.; No. 2, 3s.; No. 3, 2s. 3d. per lb. Old crop, 1s. to 1s. 9d. per lb.

SHELLAC.—Market is steady as quoted: spot, standard TN orange, 39s. to 42s.; fine orange, 55s. to 80s.; pure button, 50s. to 52s. 6d. per cwt. For delivery, TN, October, 39s. 6d.; December, 41s.; March, 41s. 6d. For arrival, TN, September-October, 37s. 6d. per cwt., c.i.f.

TRAGACANTH.—Business has shown no improvement over the past week; quotations for all descriptions are nominally unchanged: finest selected white ribbon, £65; No. 1, white, £57 10s. to £60; No. 2, white, £50 to £54; No. 3, white, £35 to £42 10s.; amber leaf, £22; cleaned amber sorts, £16; brown to amber leaf, £11 10s.; red leaf, £9 to £10; hoggy, £6 to £7 per cwt., ex store.

TURMERIC.—Market has attracted but little inquiry this week: Madras finger, spot, 28s.; shipment, new crop, 26s., c.i.f. Rajapore, shipment, 26s. per cwt., c.i.f.

VALERIAN ROOT.—Dealers' quotations for small parcels continue at about 35s. per cwt., ex store.

WAXES.—BEES'.—Business quiet, with stocks limited; values keeping steady: Calcutta, bleached, spot, 125s.; shipment, September-October, 117s. 6d., c.i.f.; ordinary quality, spot, 95s.; shipment, September-October, 90s. per cwt., c.i.f. Benguella, in bond, 90s.; shipment, September-October, 87s., c.i.f. Conakry, 90s. in bond; shipment, September-October, 85s., c.i.f. Dar-es-Salaam, spot, 97s. 6d.; shipment, September-October, 93s., c.i.f. CARNAUBA.—Quoted unchanged on a dull market: fatty grey, spot, 152s. 6d.; afloat, 147s. 6d.; shipment, September-October, 144s., c.i.f. Chalky grey, spot, 147s. 6d.; afloat, 145s.; shipment, September-October, 142s. 6d., c.i.f. Primeira, spot, good quality, 195s.; f.a.q., 182s. 6d.; shipment, September-October, 187s. 6d., c.i.f. Mediana, spot, 180s.; shipment, 177s. 6d. per cwt., c.i.f.

### Essential and Expressed Oils, etc.

GENERAL conditions are quiet, but fully steady. Ceylon citronella is firm and short on spot. Sicilian lemon is reported very steady for shipment, and spot stocks are small. French Guinea orange is cheap but in slow demand. Japanese peppermint in fair spot demand at steady prices.

ALMOND.—Spot quotations are rather easier, business quiet: English-made, cwt. lots, 2s. 7d.; smaller parcels, up to 3s. per lb.; foreign, cwt. lots, 2s. 7d.; smaller parcels, up to 3s. per lb. French bitter, 6s. to 6s. 1½d. per lb.

ANISE (STAR).—Business remains slow on spot, with one or two cheap sellers noted; shipment market remains slack: spot, leads, nominal; tins, 3s. 4½d.; drums, 3s. 3d. per lb., ex store; shipment, leads, none offered; tins, 2s. 9d.; drums, 2s. 8d. per lb., c.i.f.

AVOCADO PEAR.—Spot quotations are steady at 46s. to 52s. 6d. per gallon, as to quantity.

BAY.—Small spot business: cases, 4s. 3d. to 5s. 3d. per lb., as to quality.

BERGAMOT.—Some shippers are quoting in American dollars, but there appears to be no change in the Consortium prices for spot oil; moderate business reported: Consortium price about 14s. 9d. per lb., c.i.f. Spot lots of genuine oil are quoted in the region of 15s. to 15s. 3d. per lb.

BOIS DE ROSE.—American dollar continues to influence shipment prices: Brazilian oil in drums at 5s. 6d., and small repacked lots up to 6s. per lb.

CASSIA.—Spot market dull and quoted keenly: good quality oil, 3s. to 3s. 1d., in leads; off-quality, at cheaper prices. Shipment market is dull and easier; leads, 2s. 7½d.; drums, about 2s. 6d. per lb., c.i.f.

CEDARWOOD.—Quoted unchanged; demand quiet: African, in drums, 11½d.; smaller packages, up to 1s. 4d. per lb. American, in drums, 11½d.; smaller packages, up to 1s. 4d. per lb.

CINNAMON LEAF.—Spot values are maintained on a slow market: quoted at about 2s. 4d. to 2s. 8d. per lb., as to quantity.

CHIRONELLA.—Ceylon is dearer and firm on spot, with supplies very scarce; only distant shipment offers. Java oil remains dull and cheap. Ceylon, spot, drums, if available, 1s. 6d. nominal; smaller parcels, up to 1s. 11d.; shipment, distant positions only, drums, 1s. 4½d. per lb., c.i.f. nominal. Java, spot, drums, 1s. 9½d. to 1s. 10d.; smaller parcels, up to 2s. 3d.; shipment, drums, around 1s. 3½d. per lb., c.i.f.

CLOVE.—Some small spot demand for repacked oil at steady prices: Madagascar, spot, drums, 2s. 9d. to 2s. 10d. per lb.; repacked in small quantities, up to 3s. 4½d. English distilled, 4s. 10d. to 5s. per lb., as to quantity.

EUCALYPTUS.—Fair inquiry being received, with quotations for good quality oil steady: Australian, 70 to 75 per cent., tins, 1s. 3½d. to

1s. 4d.; drums, 1s. 3d.; 80 to 85 per cent., drums, 1s. 6½d. per lb., ex store, with higher prices for small lots; shipment, 70 to 75 per cent., tins, 1s. 1½d.; drums, 1s. 1d.; 80 to 85 per cent., 1s. 4d. per lb., c.i.f.

GERANIUM.—A little more inquiry, with some shipment business recorded. Bourbon unsteady, Algerian steady: Bourbon, spot, 11s. 3d. to 12s.; shipment, about 10s., c.i.f. Algerian, spot, 12s. 3d. to 12s. 9d.; shipment, about 11s. 6d. per lb., c.i.f. Some Madagascar oil, Bourbon type, is quoted in the region of 10s. 6d. per lb., c.i.f. The quantity of this oil available is stated to be limited, but supplies are likely to increase next year.

LAVENDER.—A few quotations have come to hand, with good quality 38 to 40 per cent. new crop oil indicated at 235 to 250 francs per kilo. One reports that, with but modest business moving, the market may weaken a little.

LEMON.—The source reports that the shipment market for Sicilian hand-pressed oil is firm despite the general slackness of business, and quotes this season's oil from 10s. 10½d. to 11s., c.i.f., and next season's, January-February shipment, at 11s. 3d. per lb., c.i.f. The spot market for genuine oil is very firm, with supplies exceedingly short; 11s. 6d. reported paid this week. Machine-made, 10s. 6d. per lb., c.i.f. Californian distilled, steady at 6s. 4d. per lb., in small drums, landed.

LEMONGRASS.—Shipment market remains slack and quoted nominally unchanged: spot, 1s. 7½d. to 2s., as to quantity and packing; shipment, September, 1s. 4½d.; September-October, 1s. 5d. per lb., c.i.f.

LIME.—Business quiet, and the market is quoted cheaper and is competitive: West Indian, distilled, 18s. 6d. to 19s. per lb., as to quantity. Oil from other sources is offering here at about 16s. to 17s. per lb., as to quantity.

OLIVE.—Market continues fully steady, fair amount of business: B.P., 1 per cent., 5s. 10½d. per gallon, in drums. Edible quality, ten 1-gallon tins, in cases, 77s. 6d.; twenty ½-gallon tins, 82s. per case; drums, 6s. 3d. per gallon.

ORANGE.—Cheap quotations and a lack of good business are the features of the French Guinea product: spot, in drums, 2s. 9d.; repacked, in tins, 3s. to 3s. 3d. per lb., ex store; shipment dull at about 2s. 2½d. per lb., c.i.f. A parcel in bond is reported to be available at 2s. 3d. Californian, spot, one case, 2s. 8½d.; two or more cases, 2s. 6d.; large drums not quoted; small drums, 2s. 5d. per lb., landed; cold-pressed, 3s. 2d. per lb., c.i.f., in cases. Offers of large quantities of orange oil from various sources at very cheap prices indicate that there is something approaching a world glut of this commodity.

PALMAROSA.—Market is not attracting much business, quoted unchanged: spot, about 7s. 9d. to 8s. per lb.; shipment offers, prompt, 6s. 9d., c.i.f., and new crop, distant shipment, 6s. 7½d. per lb., c.i.f. A little Java oil is quoted here at about 4s. 10½d. per lb., c.i.f. Further supplies expected next March-April shipment.

PATCHOULI.—A little inquiry for the Singapore product; quotations are irregular: Singapore, spot, about 12s. 3d., with bulk quantities cheaper. Seychelles, spot, about 10s. 6d. Java oil is offering at very keen prices, but some quarters hold the opinion that this oil is not, in some respects, equal to the Singapore product.

PEPPERMINT.—A good consuming trade demand is reported on spot, with quotations at about 4s. 10½d. to 5s., as to seller. There are resellers of August-September at 4s. 6d., c.i.f. No prompt shipment offers from Japan; quotations only for October-December at 4s. 6d. to 4s. 8d., c.i.f., as to shipper. Speculative seller of this position at about 4s. 4½d., c.i.f. American natural oil, in drums, is very firm at 2 dollars 30 cents to 2 dollars 35 cents per lb., c.i.f. Bulgarian is offered at 11s. per lb. and Russian at 7s. 6d. per lb., c.i.f.

PETITGRAIN.—Quoted about unchanged, business quiet: spot, cases, 3s. 9d. to 3s. 10d. per lb.; shipment, 3s. 3d. per lb., c.i.f. French oil, to come forward, is quoted from the source at 950 francs per kilo.

RAISIN SEED.—Business slow: Californian, spot, 2s. 4d. to 2s. 6d. per lb., ex store, as to quantity.

ROSEMARY.—Inquiry is mostly for small spot parcels: genuine Spanish quoted at about 3s. to 3s. 6d. per lb., as to quantity. Tunis, new crop, 2s. 8d. to 2s. 10d. per lb., landed, as to quantity.

SANDALWOOD.—Genuine East Indian Mysore, in one-case lots, steady at 20s. 6d. per lb. Genuine East Indian, produced outside the province of Mysore, 18s. 6d. to 19s. per lb., c.i.f., in bulk quantities. English-made West Indian, 7s. 3d. per lb. Australian, steady at 15s. 3d. per lb. for 7-lb. tins; one case at 14s. 9d. and five cases at 14s. 6d. per lb.

SPEARMINT.—Steady on a slow market: U.S.P. oil, spot, 9s. to 9s. 3d.; shipment, 8s. 5d. per lb., c.i.f.

SPIKE.—Quiet business, with value rather cheaper: genuine Spanish, about 5s. 1½d. to 5s. 6d. per lb., as to quantity and seller. Some oil offered for shipment from Spain recently. Blended oils offering at cheaper prices.

VEITIVERT.—The crop of Bourbon is reported to have been short this season and to have been all sold at good prices: offers of oil, to arrive, 15s. to 16s., c.i.f., for bulk quantities; small lots, on spot, about 19s. to 20s. per lb.

WORMSEED.—Rather cheaper on spot; shipment steady: U.S.P. oil, spot, 11s. to 11s. 3d.; shipment, 10s. 6d. per lb., c.i.f.



# Correspondence

Correspondents may adopt an assumed name, but must in all cases furnish their real name and address to the Editor

## Queries for the Council

SIR,—As I read your report of the September meeting of the Pharmaceutical Society's Council, there are in it two matters which are not likely to be "liquidated" for several years: I refer to the Brunswick Square plans and the influx of foreign pharmaceutical aspirants. On looking up past reports I find that on October 30, 1934, a member of the Council, speaking at Blackburn, "thought the total requirements for the new headquarters would not be far short of £150,000." A few weeks earlier you had published a signed article in which the cost, including that of the site, was estimated at £257,000. From these two sums we obtain, in round figures, an average of £200,000. Now, within four years, we are told (p. 256) that "£310,000 must be fixed as the limit which the Society's present resources and anticipated income over the next two years justifies expending on the building, contents, fittings, equipment, fees and all extras." How much farther is the screw to be tightened? We have heard, from time to time, of the forward-looking vision of the founders of the Society in connexion with premises. Such talk almost answers itself. When the main portion of the present headquarters was taken in 1858, the building was by no means new; but it has served its purpose till a comparatively recent date, and I for one fail to see why an existing building should not again have been acquired by the Society, especially in view of the fact that comparable expansion during the next eighty years is not contemplated by anyone but a few enthusiasts. The other matter of pressing importance in the report referred to is the handling of foreign applications for British registration as pharmacists. We have to see that British pharmacy does not become a dumping ground for aliens with an outlook differing more or less widely from our own; and in this duty the Council of the Society has the primary responsibility.—Yours faithfully,

VIGILANS.

## Sidelines in the Pharmacy

SIR,—Without the addition of side-lines, as your contributor remarks, pharmacy under present conditions cannot provide a living (*C. & D.*, September 10, p. 252). The question is whether it would be self-supporting if the separation of prescribing and dispensing were brought about. Restriction of dispensing to the pharmacist would surely mean relinquishing counter prescribing, and this would necessitate some definition of the term so that we should know how far we were within our rights in recommending some simple remedy. Moreover, even in countries where restriction of dispensing is in force people buy herbs and simples to make their own infusions, and one cannot imagine them giving up such an old-established custom, nor legislation being introduced to compel them to do so. There are also the hundreds of advertised proprietaries and chemists' own lines, which the public will still expect to buy. Would the sale or recommendation of any of these, or even the answering of customers' inquiries on their use or efficacy, be considered a form of prescribing? If the principle of separation were strictly adhered to, all these customers would have to be seen by the doctor first to get a prescription that would be dispensed at a pharmacy. Would the doctors themselves wish to treat every insignificant trouble, or would there not rather have to be a certain latitude? Suppose dispensing were restricted to pharmacists, it would be either accompanied by, or consequent upon, a largely extended scheme of National Health Insurance benefit. In suburban and industrial districts the whole of the dispensing would come to be from panel scripts, and we know from the experience of the last twenty-five years that one of the peculiarities of panel work is that the more one does the less one gets for it. Unless the tariff rates were adjusted on a more favourable basis than at present pharmacy would still remain dependent on its side-lines, if not actually subsidised by them, on account of the extra expense a larger staff and longer hours of service would entail. Government control should carry with it Government recognition, and if pharmacists at some future date are to be subjected to further control, remuneration ought to be on an adequate scale.—Yours faithfully,

SEPARATIST.

## Time Factor in Dispensing

SIR,—It might be of interest to know on what grounds the original estimate of five minutes was taken as the average time required for dispensing a mixture (*C. & D.*, September 10, p. 252). It hardly seems fair to base a tariff of dispensing fees on the time taken for mixtures, because other preparations may take considerably longer, and although probably the majority of prescriptions presented by panel patients may be for mixtures, and mostly Formulary mixtures, yet there are other medicaments in the Formulary which could certainly not be dispensed extemporaneously in five minutes. Nor can one think that the five-minute allowance was estimated from a survey of private dispensing, unless from "flat-rate" dispensing, a system in vogue before National Health Insurance, and by which doctors sent their scripts to the pharmacy to be dispensed under plain labels and delivered to the patients by the doctor's boy. I had some experience of this kind of work, and our rate was a penny an ounce and a penny the bottle, expensive drugs being charged extra. Consequently, in order to keep cost down to the flat rate, mixtures were of the simplest kind, and five minutes was probably a reasonable time to allow. Looking back on this system in the light of present-day conditions, one wonders if it was not a mistake to have undertaken dispensing at such prices, and whether the existence of this method did not have some bearing on the low rates fixed for the Insurance tariff. If all Insurance medicines were kept in stock form, it might be possible to turn out a steady flow at five minutes each, but they are expected to be dispensed extemporaneously, and even if they are not the stock has to be made up; dispensing and shop bottles have to be filled; drugs have to be ordered, taken into stock and empties returned; panel customers have to be served; returned bottles have to be cleaned; and there is a fair amount of clerical work. All this time must under any costing system be averaged out and added to the actual compounding time. Even if all this were calculated out, it would be found that in practice one could not work to schedule, because along would come a prescription that could not be dispensed without reference to the doctor, or a script for some proprietary the source of which required tracing. It is noteworthy that a Dover pharmacist in 1920 should arrive at a time factor so closely approximating to the South African twelve minutes, but there is another curious point. Five shillings an hour is a penny a minute, or fivepence for five minutes, the dispensing fee paid and the time estimated for dispensing an Insurance mixture.—Yours faithfully,

CINQ MINUTES.

## Redundant Pharmacies

SIR,—"Hopeful" (*C. & D.*, September 10, p. 275), in his letter on "Too Many Chemists," refers to chemists taking apprentices as cheap labour, and attributes the redundancy of pharmacies in part to the number of persons so trained. I was apprenticed in the closing years of the last century in a business where there were always three apprentices serving their period of three years, one finishing as another was commencing. Undoubtedly a lot of the work might have been classed as cheap labour—long periods were spent in cleaning the pharmacy, putting away goods, packing salts, etc., but at the same time there was a good training in the practical work of pharmacy, since all ointments, emulsions, pills and many galenicals were made in the shop. On looking through the requirements made compulsory for apprentice-masters in South Australia (*C. & D.*, September 3, p. 230), it occurred to me that they would have been well covered during my own apprenticeship, for during the second year we were promoted to the dispensing counter, and the third year was mostly spent in dispensing under the supervision of the senior qualified assistant. And yet in spite of this "cheap labour" there was no difficulty in securing a berth after qualification. It was not till after the war that the number of qualified exceeded the openings for them, and too many opened on their own account, often in places where there was already a sufficient service. Now there are many chemists who take no apprentices, and the position may right itself in course of time.—Yours faithfully,

SPERANZA.

C C



## Miscellaneous Inquiries

We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them

*D. L.* (30/8).—**TOLUENE DIAMINES.**—Toluene diamines and their salts when used in hair dyes are Part II poisons. For this class of preparation there is a special cautionary notice which reads: "Caution.—This preparation may cause serious inflammation of the skin in certain persons and should be used only in accordance with expert advice." (See *C. & D. "Poisons Guide,"* p. ii of cover and p. 34.)

*C. L. L.* (22/8).—**BILIOUS TABLETS.**—The formula for which you ask is as follows:—

Aloin .. .. .	10 gr.
Euonymin (brown) .. .	15 gr.
Ipecacuanha root, in powder .. .	15 gr.
Mercurous chloride .. .	15 gr.
Podophyllum resin .. .	6 gr.

Mix and divide into 120 pills or tablets.

*M. M.* (16/8).—**TEST FOR COUNTERFEIT COINS.**—The chief materials used in counterfeit coins are, we believe, zinc and lead, and the following are practical qualitative tests for detecting the presence of these separately in a coin: *Lead.*—Dissolve a fragment of the suspected coin in a little nitric acid. To the solution add a little potassium iodide solution. A canary-yellow-coloured precipitate of lead iodide would be formed if lead were present. *Zinc.*—Make a solution of a fragment of the coin in nitric acid. Add one drop of ammonia solution to 1 c.c. of 10 per cent. resorcinol in alcohol, then add a little of the nitric acid solution suspected of containing zinc. The purple colour produced by the action of ammonia on the resorcinol, in the presence of zinc, changes first to golden yellow, then to green, and finally to deep blue.

*S. M. T.* (12/9).—**TONING GASLIGHT PAPERS.**—The following formulas are among those given in "Pharmaceutical Formulas," Vol. II:—

### BLUE TONING

Solution of iron and ammonium citrate (10 per cent.) .. .	2 oz.
Solution of potassium ferricyanide (10 per cent.) .. .	2 oz.
Acetic acid .. .	20 oz.

### GREEN TONING

Solution of uranium nitrate (1 per cent.) .. .	25 c.c.
Solution of iron and ammonium citrate (1 per cent.) .. .	25 c.c.
Glacial acetic acid .. .	10 c.c.
Solution of potassium ferricyanide (1 per cent.) .. .	50 c.c.

*P. D. W.* (3/9).—**ANALYTICAL METHOD.**—An alternative method to the textbook group separation of chromium, iron and aluminium salts is as follows:—The chromium sulphate is oxidised to a soluble chromate by means of chlorine or bromine in a solution made strongly alkaline with potassium hydroxide. The resultant iron hydroxide precipitate is filtered off and the filtrate is acidified with nitric acid. The aluminium is precipitated as hydroxide by ammonia solution. The chromate in the filtrate is reduced to a chromic salt again by concentrated hydrochloric acid and alcohol, precipitated with ammonia and weighed as an oxide.

*R. L. F.* (12/8).—**LIQUID SHOE POLISH.**—The following are suitable formulas:—

I	
Yellow wax .. .	1 oz.
White wax .. .	1 oz.
Hard soap .. .	2 oz.
Oil of turpentine .. .	16 oz.
Boiling water .. .	6 oz.
II	
Yellow wax .. .	1 lb.
Oil of turpentine .. .	50 oz.
Curd soap .. .	1 oz.
Solution of potash .. .	5 oz.
Water .. .	to 80 oz.

Melt the wax and add the oil of turpentine; when clear and while still warm add all at once the curd soap and solution of potash previously dissolved by heat. Shake until emulsified, and dilute gradually with warm water to 80 oz.

*W. S. P.* (9/9).—**PROPERTIES OF SODIUM RICINOLEATE.**—Sodium ricinoleate possesses detoxifying properties (probably due to adsorption of toxins), and by lowering the surface tension of solutions it inhibits the growth of many bacterial organisms. It has been used in the treatment of pyorrhœa in a 1 to 4 per cent. solution, which is run into the pyorrhœal cavities with a syringe, and left for a few minutes. It is used also as an antiseptic in inflammation of the gums and in spirochaetal infections of the tonsils.

*S. F. K.* (22/8).—**TREATING OPEN PORES.**—The following are suitable preparations for the purpose:—

### I

Alum .. .	6 dr.
Boric acid .. .	2 dr.
Tincture of benzoin .. .	2 dr.
Glycerin .. .	1 oz.
Rose water .. .	10 oz.
Distilled water .. .	to 20 oz.

Dissolve the alum and boric acid; add the glycerin and benzoin, shake two or three times, then strain through calico to clear any free gum.

### II

Distilled witch hazel .. .	10 oz.
Boric acid .. .	½ oz.
Glycerin .. .	1½ oz.
Menthol .. .	3 gr.
Rectified spirit .. .	3 oz.
Perfume .. .	a trace
Distilled water .. .	to 20 oz.

*D. M.* (8/9).—**SOYA BEAN IN DIABETIC FOODS.**—Soya bean flours have been used in diabetic foods, in some instances mixed with small quantities of other flour. The average composition of the flour is: protein 40 per cent., fat 20 per cent., water 10 per cent., carbohydrates (in the form of sucrose, dextrin and a little starch) 22 per cent.

*H. D. S.* (12/38).—**LICENCE REQUIREMENTS.**—A justices' certificate is necessary in order to obtain an "off" licence for selling wine by retail. The Revenue authorities consider that a person who wishes to obtain a wine retailer's off licence must also hold either a wine dealer's licence or the justices' certificate. Application for this certificate has to be made at the general annual licensing meeting, and the applicant must, among other things, give notice to the clerk to the licensing justices twenty-one days before the day of the meeting, stating name and address, licence applied for and situation of premises. The granting of a new licence requires confirmation by the confirming body of justices. There is no appeal from the justices' decision. In law there is no exemption for the sale of medicated wines, but the Commissioners of Customs and Excise do not insist on a licence if the wines satisfy two conditions. They must be sufficiently medicated not to be used as a beverage, and the label must contain directions for the dose, etc.

## Retrospect of Fifty Years Ago

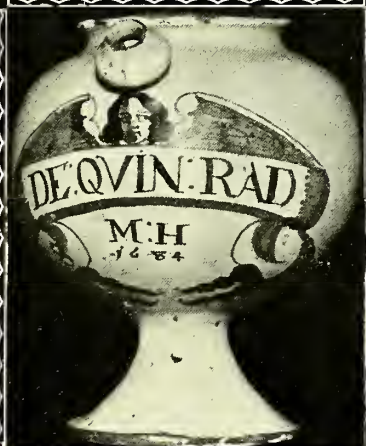
Reprinted from

"The Chemist and Druggist," September 15, 1888

### The Teaching of Chemistry

The connexion between the study of chemistry and that of medicine, and the maintenance of this connexion down to even the present generation, is illustrated by the fact that a large number of men who have become eminent as chemists began their career in the surgery or the pharmacy. Black, Daly, Berzelius, Wollaston, Wohler, Wurtz, Andrews and W. A. Miller began by the study of medicine, whilst Scheele, H. Rose, and the great names of Liebig and Dumas are to be found in the long roll of those who received their earliest notions of chemistry in the pharmaceutical laboratory. Chemistry has been gradually emancipated from these associations with enormous advantage to both sides. So long as technical purposes alone were held in view a scientific chemistry could not exist, but no sooner did the study take an independent form and direction than multitudes of useful applications of the facts discovered became apparent.





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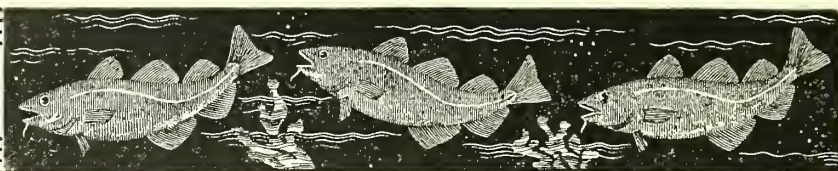
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2. Always read the directions before taking a dose.
3. Never increase the dose or take the medicine more frequently than prescribed without consulting your physician.
4. Keep the label upwards when pouring. This keeps the label clean.
5. Shake any liquid medicine before taking.
6. Never take medicine prescribed for someone else.
7. Keep medicine out of reach of children.
8. Never leave a medicine bottle or box open. Close immediately after using.
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And when you want your prescriptions compounded with absolute accuracy, the freshest and purest ingredients, at reasonable prices, come to the Rexall Pharmacy in . . . . . or telephone . . . . .

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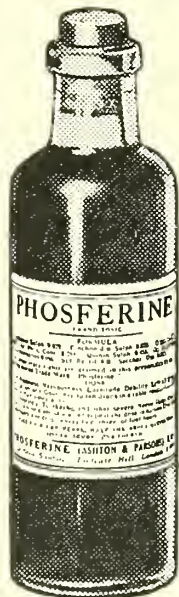


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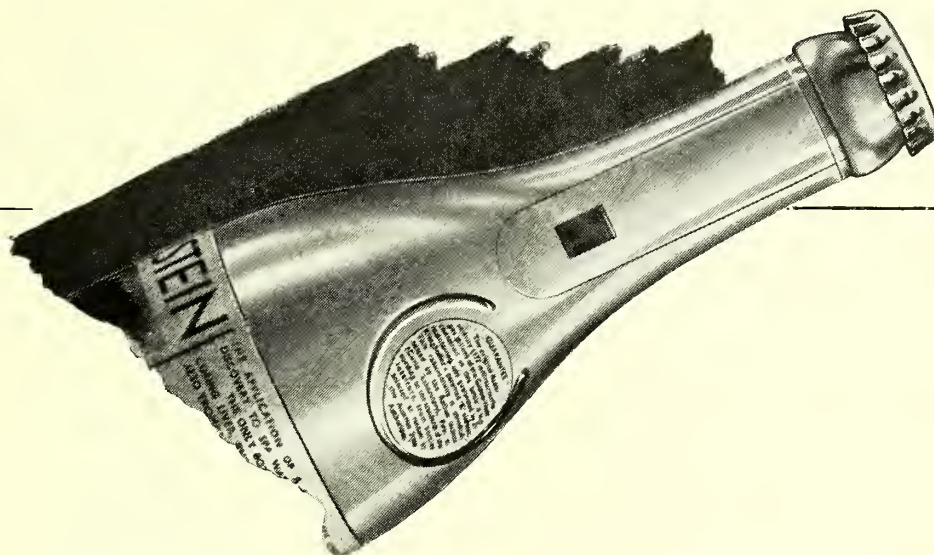
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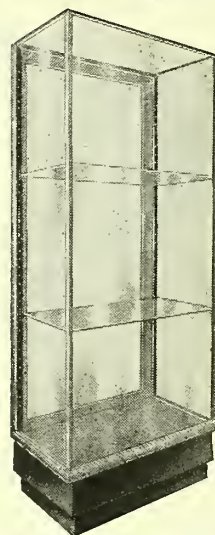
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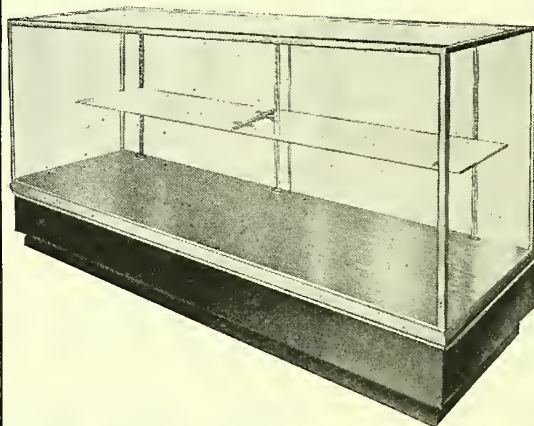
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28 ESSEX STREET, LONDON, W.C. 2

SEPT. 17,  
1938

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**CHEMIST AND DRUGGIST**

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**DRUG STORE.**—Populous working-class district; neglected through illness; excellent opening for Qualified; rent, rates, net £35; flats housing 1,500 people, almost ready for occupation, 100 yards away; £110 (approximate valuation) for quick sale. Write Herbold, Loxford Lane, Ilford.

**FOR SALE.**—Old-established West End business; heart of West End; easily managed. 39/3, Office of this Paper.

**HIGH-CLASS Herbal Stores,** many proprietaries; established 25 years; certified net profits £330 per annum; good opening for Qualified man; position opposite site new cinema, centre of city, Leeds; age cause of retirement. 36/2, Office of this Paper.

### SMITH AND SHEPPARD, LTD. (IN LIQUIDATION)

**FOR SALE AS A GOING CONCERN,** the Business of Surgical Instrument and Artificial Limb Makers, Suppliers and Hospital Contractors, carried on by the above company at 124 St. Stephen's Green, Dublin, with the company's interest in the premises (adjacent to the Royal College of Surgeons) and the Stock-in-Trade, Furniture, Fittings and Goodwill. The Business established for upwards of fifty years at the above address, is being disposed of by reason of the Governing Director's retirement owing to illness.

Particulars to be obtained from the Liquidator—

WM. P. PEARSON, F.L.A.A., 16 Dawson Street, Dublin

or

CARTAN O'MEARA & KIERAN, Solicitors,  
27 South Frederick Street, Dublin.

**SNIP.—NO GOODWILL ASKED: CENTRAL LONDON.**—For young enterprising Qualified; immediate sale desired owing to private affairs; showing good living; easily run; can be purchased for valuation of stock and fixtures, or vendor will remove stock if desired. Write 38/21, Office of this Paper.

**£35 ALL-AT.**—Established three years; unopposed; centre large town, Eastern Counties; Herbalist; good Photographic D. and P.; fine opportunity Health Foods; rent 24s. inclusive, on agreement; 3 living rooms and kitchen. 36/1, Office of this Paper.

### PREMISES TO LET

6s. for 36 words or less; 1d. for every additional word prepaid. (Box No., 1s. extra.)

**EDMONTON.**—Shop to Let, suitable for Chemist or Ironmonger, in parade of shops opposite station, flat over (self-contained), now let at £52 per annum; rental £156 per annum, exclusive; will grant long lease. Apply, Owner, 38 Church Street, N.9.

**SOUTH-EAST LONDON.**—One minute Station; newly-erected, main-road, spacious lock-up Shops in established district, with large number of new houses; would be divided into half-shops if required; rent £150; proposals invited. Dyer Son & Creasey, Auctioneers, Blackheath, S.E.3, and 24 Budge Row, E.C.

### BUSY MAIN ROAD POSITION

**COMMODIOUS** Shop Premises, situate prominent corner position; densely-populated district of Hampstead, adjoining Multiple Stores. Full particulars, apply:—

HERRING, SON & DAW,  
100C, QUEEN VICTORIA STREET, E.C.4.  
TEL.: CITY 7068.

**CHEMIST** urgently required in Market Place, Shenfield, in block in course of erection; best position in developed and still developing suburb, near station (being electrified); practically no opposition; nice shop and flat; £100 a year; front will be fitted. Apply (stating trade) to owner, Mr. Dartnall, Forest House, High Stone, Leytonstone, E.11.

**SMART** New Modern Shop; living accommodation and shop front to tenant's requirements; to let at £150 per annum; centre of thickly-populated and prosperous North London district; excellent opening for Chemist. Apply Builder, Ealing 3543.

## APARTMENTS

### THE HAMPDEN RESIDENTIAL CLUB

**FOR GENTLEMEN,** Hampden Street, N.W.1. Close to King's Cross and Euston. 300 Bedrooms, 15s. to 22s. 6d. per week, including bath, attendance and boot cleaning. All meals à la carte in dining room. Moderate tariff. Large Club Rooms, Library, Billiards Room, Reading Room and Study for Students. Illustrated Prospectus from Secretary. Euston 2244/5.

## EDUCATIONAL

**CORRESPONDENCE** and Personal Tuition in Optics and Sight Testing.

C. V. BOLTON, F.S.M.C., 49A LEIGH ROAD, LEIGH,  
LANCS. TEL.: 527.

## SALES BY AUCTION

On Wednesday next, September 21,  
14 TAVERN STREET, IPSWICH,

**OXBORROW SON & MORGAN**

Will Sell by Auction on the premises, commencing at 2.30 p.m., by Direction of Messrs. Cornell & Cornell, Ltd., who have disposed of the business, the well-made Fixtures and Fittings of a

### CHEMIST AND DRUGGIST'S,

including Mahogany Glazed Showcase, 18 ft. run; Druggist's Mahogany Nest of 162 Drawers and 21 Lockers, 24 ft. run; Quantity of Mahogany Showcases; Pair of Dispensing and Other Scales; Platform Weighing Machine; Bell Mortar dated 1685; 37 Glass Carboys, 1-gallon size; 5 Large Carboys; Shop Rounds; Metal Show Stands, etc.

On view afternoon previous to the sale. Catalogues from the Auctioneers, Ipswich.

SALE ROOMS: 5 LITTLE BRITAIN  
(Close to G.P.O.), CITY.

**PRACTICALLY** new CHEMISTS SHOP FITTINGS in Oak and Mahogany, Drug Ruus, Wall and Counter Showcases, Silent Salesmen, Mirrors, Four National Cash Registers, also IMPORTANT COMPANY OFFICE FURNITURE, Complete Board Room Appointments, General Office Tables and Chairs, Persian Carpets, Filing Cabinets and Cupboards, Safes, Typewriters, etc. (By Order of C.E.B. of L.) Nearly 500 Lots.

**B. NORMAN & SON**

will Sell by Auction, Wednesday next, at 12.30 p.m.  
View day prior. Catalogues on application.

Tel. NAT. 6463.

## BUSINESS OPPORTUNITIES

**A REPRESENTATIVE** with long experience of selling proprietary lines in London, is anxious to join similar house; excellent results; first-class references and extremely well known to trade; experience handling travellers. 39/12, Office of this Paper.

## PATENTS

**THE** Proprietor of British Patent No. 430960 for "Improvements in Laxative Confections and process of making the same" desires to enter into arrangements by way of licence or otherwise on reasonable terms for the purpose of exploiting the invention and ensuring its full development and practical working in this country. All communications should be addressed to H. D. Fitzpatrick & Co., 94 Hope Street, Glasgow, C.2, and 49 Chancery Lane, London, W.C.2.



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## APPOINTMENTS

### CITY OF BIRMINGHAM DUDLEY ROAD HOSPITAL

#### JUNIOR ASSISTANT DISPENSER (MALE)

Applications are invited from Registered Students of the Pharmaceutical Society for the above whole-time non-resident appointment.

The scale of salary will be £150, rising, subject to satisfactory service, to £170 per annum. Applicants should be 18 to 20 years of age. Preference will be given to candidates who have passed the Preliminary Scientific Examination.

The successful candidate will be required to pass an approved medical examination, to contribute to the Superannuation Scheme established under the Local Government and Other Officers' Superannuation Act, 1922, as amended by Section 82 of the Birmingham Corporation Act, 1935—Annuities for Widows—and to join the Birmingham Municipal Officers' Widows' and Orphans' Pensions Scheme.

The appointment will be terminable by one month's notice on either side.

Full particulars and form of application may be obtained from the Medical Superintendent, F. W. Ellis, M.D., F.R.C.S., to whom applications should be sent not later than September 22nd.

### OLDCHURCH COUNTY HOSPITAL, ROMFORD

#### ASSISTANT DISPENSER

THE COUNTY COUNCIL of the Administrative County of Essex invite applications from duly Qualified persons for the appointment of Assistant Dispenser at the above Hospital. Preference will be given to candidates who have had previous experience in hospital work and who hold the Certificate of the Apothecaries Hall.

The salary will be at the rate of £150 per annum.

The appointment will be subject to the Council's Sick Pay Rules and Regulations, a copy of which will be forwarded on application, and the successful applicant will be required to pass a medical examination and to contribute 5 per cent. of his salary to the appropriate Superannuation Fund.

Forms of application and further particulars with regard to the appointment may be obtained from Mr. G. E. Pegram, Laurie Square, Romford, and must be returned to him not later than Tuesday, September 27, 1938.

E. S. HOLCROFT,

County Hall, Clerk of the County Council.  
Chelmsford.

September 12, 1938.

## APPRENTICES

CORFE & SON, Dispensing Chemists, Maidstone, have a vacancy for an outdoor Apprentice with pay; no premium required; Matriculation or higher certificate necessary; thorough tuition in all branches. Apply to the Manager, Corfe & Son, Maidstone.

## SITUATIONS OPEN

### RETAIL (HOME)

6s. for 40 words or less; 1d. for every additional word, prepaid. (Box No., 1s. extra.)

**ALTRINCHAM**, near Manchester.—Improver or Junior Assistant required; permanency; must be reliable and well recommended. Apply, with full particulars, to 38/18, Office of this Paper.

**BRISTOL**.—Permanency offered to Qualified Assistant to act as Superintendent; commence duties early as possible. Apply, stating full particulars of experience, age, etc.; salary £4; enclose photograph if possible; self-contained flat available, if required, over shop, at moderate rental. 38/31, Office of this Paper.

**LIVERPOOL**.—Unqualified Assistant (male). Kindly state full particulars of experience, age, height and salary required to R. & J. Herman, Chemists, Aintree, Liverpool.

**LEAMINGTON SPA**.—Unqualified Assistant (male) wanted, beginning of October. Apply, with usual particulars, J. Price, M.P.S., 42 Bath Street, Leamington Spa.

**LONDON CO-OPERATIVE SOCIETY, LTD.**, require the services of a Male Junior Pharmacy Assistant. Applications in writing to the Staff Manager, 54 Maryland Street, Stratford, E.15; envelope to be endorsed in top left-hand corner "Pharmacy Assistant."

**LONDON**.—Junior Unqualified Assistant required; suit youth just completed apprenticeship; excellent experience. Write, giving particulars, to 334/213, Office of this Paper.

**LONDON**.—Smart Junior Assistant or Improver for good-class shop in Streatham district; must be competent Dispenser, courteous and obliging on Counter. Please state particulars, previous experience, age, commencing salary expected and when free. Interview. 38/9, Office of this Paper.

**LONDON, E.**—Qualified Assistant for middle-class business, with N.H.I. Dispensing. Give full particulars of experience, names of references, when disengaged, age and salary required. Apply (letter only), "Chemist," 300 Amhurst Road, London, N.16.

**LONDON, N.**—Unqualified Lady Assistant required by October 1; good Saleswoman, Window-dresser and Dispenser. Apply, stating age, height, full particulars of experience and salary required, A. Grassick, 82 High Street, Hornsey, N.8.

**LONDON, W.5.**—Required at once, Unqualified Junior Assistant (young), for high-class Dispensing Business. Apply, stating full particulars, age, experience, salary, etc., to W. A. Weston & Sons, 29 New Broadway, Ealing, W.5.

**MERSEYSIDE**.—Unqualified Assistant (lady or gentleman, over 25), chiefly for private Dispensing and Display; full half-day; normal hours; comfortable and permanent berth to one having first-class experience. Full details (tabulated) in first letter, to 38/5, Office of this Paper.

**TORQUAY DISTRICT**.—Opportunity occurs for Junior Unqualified Assistant (age about 21), to gain further experience in Retail Pharmacy. Write, 334/214, Office of this Paper.

**WEST END**.—Experienced Unqualified Chemist-Optician required; mostly for eye work. Write age, experience, religion and salary required. 39/4, Office of this Paper.

## PHOTOGRAPHS, TESTIMONIALS, &c.

When replying to advertisements in this section applicants are strongly advised not to send (unless specially requested) ORIGINAL TESTIMONIALS or VALUABLE PHOTOGRAPHS. Many of these announcements produce an exceptionally large response and, as can be readily understood, the task of returning photographs, testimonials, &c., is one of some difficulty.



**ASSISTANT** required, Unqualified Junior. Apply, giving full particulars, to J. J. Thomas & Son, 54 Drake Street, Rochdale.

**AT ONCE.**—Male Junior or Improver, must have good references and be quick at Counter; young man preferred who is not going to qualify; wages moderate. Apply, 9 Thurlstone Road, West Norwood, S.E.27, or phone Gipsy Hill 0620.

**DISPENSER** required. Write immediately full particulars, salary required, to Dr. French, Hollamby House, Herne Bay.

**JUNIOR** Assistant, Unqualified, required (Male or Female); must be good Window-dresser, also knowledge of Pharmacy. Apply Early Bunn, Ltd., 95 High Street, Chelmsford, Essex.

**JUNIOR** or Improver (Male) as Third Assistant for Counter and N.H.I. Dispensing; time allowed for studying if required. Write, stating experience, age and salary required to Secretary, Latters, Ltd., 46A St. George's Road, S.E.1.

**LADY** Assistant for Optics, Hendon district; Reception, Clerical, Repairs and Fitting; permanency; Knowledge of Photography an advantage. State age, salary and experience, 39/8, Office of this Paper.

**LOVEITT & BONES, LTD.**, The Leading Chemists, Coventry, require an Unqualified Assistant; the position is now vacant and offers good scope for the right man. Applications, stating experience, salary required and enclosing a copy reference, should be addressed to the Managing Director.

**QUALIFIED** Assistant required for middle-class business in Midlands; small N.H.I.; permanency; experienced Dispenser, Salesman, Window-dresser; please state age, experience, wages required, when at liberty; comfortable position. Apply 38/3, Office of this Paper.

**QUALIFIED** Junior (Lady or Gentleman) required immediately; permanency; 5½-day week; commencing salary, £4; no N.H.I. Dispensing; references required. Phone SHE 3505 for appointment, or write Bush Stores (Chemists) Co., Ltd., 174 Railway Approach, London, W.12.

**QUALIFIED** Lady or Gentleman; part-time; five afternoons and evenings a week as Superintendent of small Retail Dispensing business near London, S.E.; or semi-retired. Apply, stating salary required, when disengaged, age, married or single, experience, to 38/1, Office of this Paper.

**QUALIFIED** Man wanted for high-class business in centre of town; must be good Salesman and capable of taking charge. Apply, stating age, height, experience and salary required. Mills, Chemist, 11 Mealhouse Brow, Stockport.

**QUALIFIED** Manager (aged about 30) for newly-built shop; Chingford district; living accommodation available, 20s. per week; salary £5. Apply, 334/215, Office of this Paper.

**QUALIFIED** Manager wanted at once for pleasant and modern shop and house in very healthy district; preferably to make use of house; 5 miles out from Ilford. Apply, 73 Beechmead Road, Luton, Beds.

**UNQUALIFIED** Assistant for medium-class Retail and Dispensing business; reliable Dispenser, good at Counter and Display. Please state age, height, experience and salary required, with references (photo if possible), to L. A. James, 6 Grange Parade, Uxbridge Road, Hayes, Middlesex.

**UNQUALIFIED** Assistant (male or female), must have had good Dispensing experience. Apply, Schofield, 195 Widmore Road, Bromley, Kent.

**UNQUALIFIED** Assistant (male, unmarried) required for a good-class business; commence September 26; must be of good appearance and address; quick, accurate Dispenser, neat writer. Please give full particulars re experience, age, height, references, wages required, to Nicoll, Chemist, High Street, Dorking, Surrey.

**UNQUALIFIED** Junior Assistant required from the end of September; Dispensing and Counter. Apply, with particulars, to A. P. Sampson, 83 High Town Road, Luton, Beds.

**UNQUALIFIED** Junior wanted at once; good-class experience. Full particulars, salary and when disengaged, to Ashworth, Church Street, Weybridge.

**UNQUALIFIED** Lady or Junior Male Assistant required shortly; permanency. State full details of experience, age, salary required, when disengaged, copies of references (if any), and photo if possible (which will be returned), Haydon, Chemist, 25 Mount Pleasant Road, Hastings.

**WANTED**, energetic Assistant (Unqualified); must be experienced, reliable Dispenser, with good general knowledge of Retail trade. State age, details of experience and salary required, with references, to Manager, Anderson & Virgo, 23 St. John's, Worcester.

**WANTED**, energetic Unqualified Assistant, for good-class business in South Manchester. State age, experience and salary required. 38/29, Office of this Paper.

**WANTED**, M.P.S. to manage shop for new firm (Cash Chemists) near Redhill. Write A., 30 St. John's Road, Redhill, Surrey.

**WANTED**, Manager to take full charge of business, with view to purchasing; instalments would be considered; N.H.I. and good Photographic trade; living accommodation above shop; lady or gentleman; S.E. Apply, 38/23, Office of this Paper.

**WANTED**, Young Junior or Improver in October, accustomed to Counter and N.H.I. Dispensing. Apply, stating age, usual particulars and salary required (outdoors), H. P. Turner & Son, Chemists, Lydney, Glos.

**YOUNG** Qualified Chemist wanted, October 3, to manage small branch business; commencing salary £4 per week, increasing as takings increase. Full particulars to Large, 149 Broad Street, Dagenham.

#### VACANCIES FOR LOCUMS

**QUALIFIED** Locum required to commence work on Monday, September 19; working-class district; duties light and convenient hours; suit an elderly chemist. Reply to Chemist, 97 Southwark Park Road, S.E.16.

#### WHOLESALE

**LABORATORY** Assistant wanted (age 18-20); some knowledge of ordinary Pharmaceutical Manufacturing operations essential and familiarity with Oxygen Tents an advantage; 25s. to 38s. per week, according to experience. Apply, by letter only, to Chief Pharmacist, Guy's Hospital, S.E.1.

**REQUIRED**, commencing October, man or woman (not under 25) for training, view to taking charge of Bottle-filling, labelling and order assembling department of old-established London business; experienced high quality work preferably with chemicals or medicinals. State in detail past experience and wages required. 21/4, Office of this Paper.

**SALES** Representative required for disposal of Veterinary lines to farmers. Apply, 32/8, Office of this Paper.

**TWO** Representatives required at once for Northern Ireland and Cumberland, Westmorland, Durham and Northumberland; proprietary articles having constant and increasing demand; car owners preferred; high commission basis only; applicants must have good connexion amongst Chemists and Druggists. Write, stating age, experience and full particulars, 334/212, Office of this Paper.

#### NAMES AND ADDRESSES

When sending advertisements for any of the columns of this Supplement, advertisers—as a guarantee of good faith and not necessarily for publication—should always give their names and addresses. It sometimes occurs that this rule is not adhered to and delay and disappointment ensue. Strict attention to this detail will be appreciated.



## SITUATIONS WANTED

## RETAIL (HOME)

2s. for 18 words or less; 1d. for every additional word, prepaid. (Box No., 1s. extra.)

**A**. —MANAGER, Qualified (40), requires change; Wandsworth or vicinity; used busy trade; excellent references and experience all branches. 38/39, Office of this Paper.

**A**S Qualified Manager, Senior Assistant or Locum (33), tall, wide experience, good-class Dispensing, Counter, Toilets, Photography, etc.; excellent long references; would work up neglected business; free. F. West, 2 Southville Close, West Ewell, Surrey.

**A**SSISTANT, Unqualified Lady, thoroughly experienced Counter, Dispensing, Display, Toilets, Veterinary, etc.; two posts 16 years; salary £143; could be free October 1; sound references. Gledson, 18 Leet Street, Coldstream.

**A**SSISTANT, Unqualified (38), City and West End experience, seeks position Birmingham; keen, energetic. Williams, 2 Grosvenor Park, S.E.5.

**A**SSISTANT, Unqualified (30), desires change; neat Dispenser, excellent Window-dresser, expert Photographer. Taylor, 46 Park Street, Horsham.

**A**SSISTANT, Unqualified (30), 5 ft. 9 in.; all-round experience with good-class Chemists. Smith, 9 Broadway, Kettering, Northants.

**A**SSISTANT (37), married, desires permanency; Qualified and accurate Dispenser (Hall); good Counterman, Window-dresser and all-round Photographic; homely and honest; at liberty one month; Manchester or district. 37/9, Office of this Paper.

**A**SSISTANT (45), Unqualified; experienced; 5 ft. 8 in.; abstainer; permanency preferred; London; free October 1. Mack, 23 Ederline Avenue, Norbury, S.W.16.

**D**ISPENSER-SECRETARY (Hall); seven years' excellent experience Panel and Private practices; London and districts; Typing, Surgical Dressings. Apply, 36/3, Office of this Paper.

**E**XPERIENCED Assistant desires engagement, married, with or without living accommodation; any district. Andrews, 509 Christchurch Road, Boscombe, Bournemouth.

**G**ENTLEMAN, Unqualified, married, wishes return Retail with or without view to succession; good knowledge all branches; own business 7 years, successful; interview preferred, permanency essential. McLennan, Nimmer, near Chard, Som.

**L**ADY, Registered, having good general experience, desires morning and Saturday employment; near London. 38/51, Office of this Paper.

**M**ANAGER, Qualified (38); good all-round experience; free end of month; interview on Sundays or Wednesdays, p.m.; London or Middlesex. 38/52, Office of this Paper.

**P**HARMACIST, young, tall, well educated, wide experience all branches Counter, Dispensing, Manufacturing Toilet, Photography, Optics (O.B.A.C.), Surgical Fitting, Buying and Stock Control, Staff Control, Branch Supervision; seeks position of responsibility. 38/27, Office of this Paper.

**P**HARMACIST (26), experienced all types of retail business, requires position in London with two free evenings for study; moderate salary. 38/20, Office of this Paper.

**Q**UALIFIED, free September 26, desires post as Manager (permanency); keen, active, reliable; would consider Locum work; over 20 years' experience. Chemist, 39/5, Office of this Paper.

**Q**UALIFIED Lady desires permanency; experienced; Manchester or 50-mile radius. 38/40, Office of this Paper.

**Q**UALIFIED Lady, experienced; London preferred, not essential. Full particulars first letter, please, 36/4, Office of this Paper.

**Q**UALIFIED Lady (27), seeks permanency; W. or S.W. London preferred; all-round experience; free early October. 38/32, Office of this Paper.

**Q**UALIFIED Manager (26), well experienced all branches; permanency; high-class Dispensing and Toilets; reliable; free October 1. "Chemist," 172 Upper Elmers End Road, Beckenham. Phone 2967.

**Q**UALIFIED, seeks permanency, reliable, experienced as Manager and Relief Manager in London; now doing Locum; free September 26. Chemist, 17 London Road, High Wycombe, Bucks.

**Q**UALIFIED (42), extensive experience all branches of West End, suburban, working-class Retail; disengaged; salary reasonable. Montague, 62B High Road, N.2.

**Q**UALIFIED (23), seeks progressive post, London or district; tall, good appearance; experience of branch managership; keen worker; free October 8. Sloper, Leywood, Box, Wilts.

**Q**UALIFIED, 20 years' experience; married; desires position. Management or First Hand; London area; tall, alert, conscientious. Siddall, 211 King Street, W.6. Phone: RIV. 3548.

**U**NQUALIFIED married gentleman, experienced, competent, desires permanency, Assistant, Manager Drug Stores or Clerical work; Wales preferably; excellent references. 4/7, Office of this Paper.

**U**NQUALIFIED (32), tall, exemplary character, seeks new post; experienced, General Retail, Photographic, Surgical Appliances fitting. 38/43, Office of this Paper.

**Y**OUNG Lady, Hall Qualification, requires permanency in Birmingham area; quick Dispenser, with knowledge of Book-keeping. Miss Ware, Tele.: Shirley 2578.

## LOCUMS SEEKING ENGAGEMENTS

**C**HEMIST, Locum or permanency, experienced; recommended; disengaged September 26; London or Provinces. Chemist, 24 Hillside Crescent, South Harrow, Middlesex, or Market Place, North Walsham, Norfolk.

**E**XPERIENCED Chemist, free September 23; Locum or Permanency; London or Provinces; phone MAC 3715. 61 Cheltenham Road, S.W.4.

**L**ADY, Locum, free September 19 to October 1, both dates inclusive; used to Managing. Apply 16 College Avenue, Maidenhead, Berks.

**L**ADY, Unqualified, Locum or permanency; Dispensing and Counter; free October 3; excellent references. "Chemist," 7 Dunbar Road, Forest Gate, E.7.

**L**OCUM, Manager or Super.; all-round experience and references; free September 17. Telephone Reliance 2741. J. L. Davies, 164 Clapham Road, London, S.W.9.

**L**OCUM work required, commencing September 19; Unqualified male; well experienced and recommended. Barues, 62 Galveston Road, Putney, S.W.15.

## PRICE LISTS, TRADE CIRCULARS, SAMPLES, AND PRINTED MATTER

can in no case be forwarded, the Box numbers being intended exclusively for specific answers to particular advertisements. The Publisher reserves the right to open and refuse to forward any communications received which he may consider contrary to this rule.



# WHOLESALE

## A POSITION AS SALES MANAGER OR ASSISTANT

**R**EQUIRED by well-educated Pharmacist with 10 years' practical Wholesale selling experience and holding diplomas in Accountancy, Marketing and Sales Organisation; personality and controlling ability. 39/10, Office of this Paper.

**A**DVERTISER seeks situation; first-class experience of Compounding and Formulating all types of Cosmetics and Toilet Preparations. Favell, 7 Queen's Crescent, N.W.5.

**A**DVERTISER, with sound knowledge of Retail Pharmacy and Pharmacists; 15 years' Retail experience as Assistant and Manager (age 32); desires position as outside Representative to reputable Wholesale House; one that gives scope for initiative and enterprise; own car. 38/30, Office of this Paper.

**L**IVE Representative, strongly established London connexion, open to Represent well-known House; salary, commission and expenses; or take over connexion, expenses and commission; excellent credentials and selling records. 38/54, Office of this Paper.

**P**HARMACIST (26), 5 ft. 11 in., at present Retail Manager, desires position as Medical or Pharmaceutical Representative; conscientious, keen, smart appearance; interview. 39/2, Office of this Paper.

**R**ELIABLE Young Man, open to accept agencies in Ulster; first-class references. John Simpson, 106 Ballygomartin Road, Belfast.

**R**EPRESENTATIVE (Toilet and Perfumery) requires two good lines; strong connexion amongst Chemists, principal Hairdressers and Wholesalers in major portion of London, North of Thames. 38/49, Office of this Paper.

**R**EPRESENTATIVE, young, capable and conscientious, Registered Pharmacist, desires change and offers his services in Lancashire; Representative, Retail and Hospital experience; car owner. 38/10, Office of this Paper.

**T**ABLET Maker, capable; fully experienced; Granulating, Compressing, Coating; knowledge of Pill making; disengaged. 38/11, Office of this Paper.

# THE SUPPLY OF SUPPLEMENTS

On receipt of addressed Post Office  
Wrappers (not more than six at a time)  
stamped 1d. the Chemist and Druggist  
Supplement will be forwarded without cost.

LOOSE STAMPS WILL NOT BE ACCEPTED

If wrappers bear a halfpenny stamp only, Postal  
delivery may be delayed.

**CLEAR OUT**—your Old or Damaged  
Stock of Photo Goods.  
*Why keep them any longer? Turn them into CASH.*  
**I GIVE BEST PRICES** for Old Films (damaged, fogged  
or expired dates); Packet  
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Bromide Papers. Plates (all sizes, all makes). Send any  
goods in the photoline. I buy all, good or bad. Cash per  
return. A good price for all Cameras. Send them along.  
**S. E. HACKETT, 23 July Road, Liverpool**

## FOR SALE

6s. for 36 words or less; 1d. for every additional word,  
prepaid. (Box No., 1s. extra.)

**C**ASH REGISTER, National, for sale; good condition; suit  
busy shop; keys to £1. Write, W. Timms, 24 Affleck  
Street, N.1.

**E**ASTBOURNE.—Complete set of Fittings, as now fitted in shop,  
16 ft. by 16 ft.; Counter, Wall Cases, etc., in Mahogany; or  
could arrange premises to be taken over and fittings remain;  
Chemist for 14 years. Apply 38/25, Office of this Paper.

## MISCELLANEOUS

10s. for 60 words or less; 1s. for every additional 10 words  
or less, prepaid. (Box No., 1s. extra.)

**F**OR disposal, 100 dozen Clinical Thermometers,  $\frac{1}{2}$  min. mag-  
lense, at 6s. per dozen, delivered free in six-dozen lots; also  
several gross of Viscose Bottle Caps in all sizes and colours  
(samples sent on request) from Bargains Unlimited, 278 Dalston  
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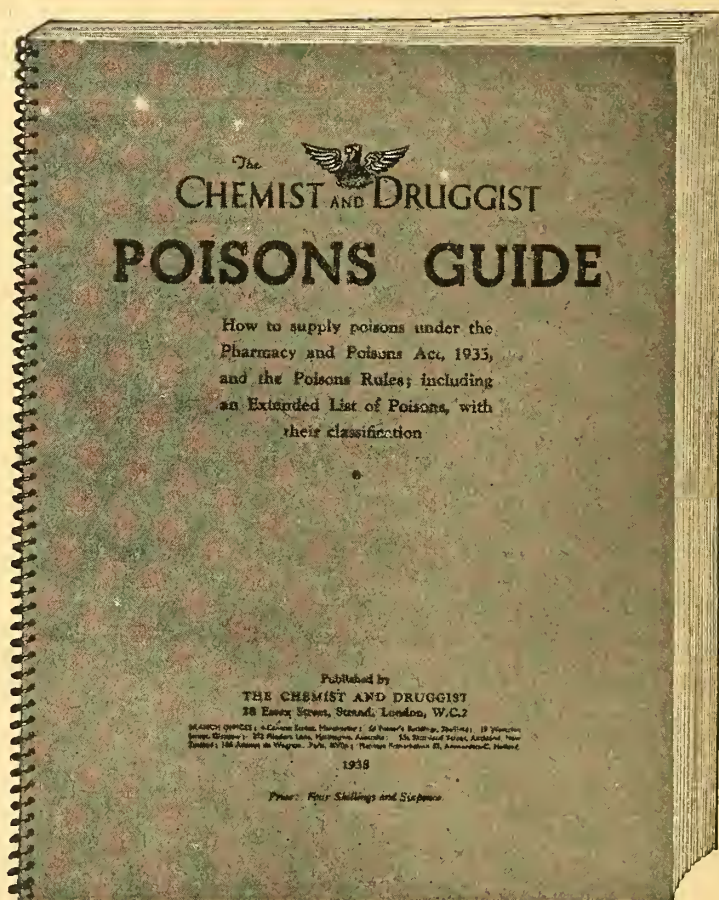
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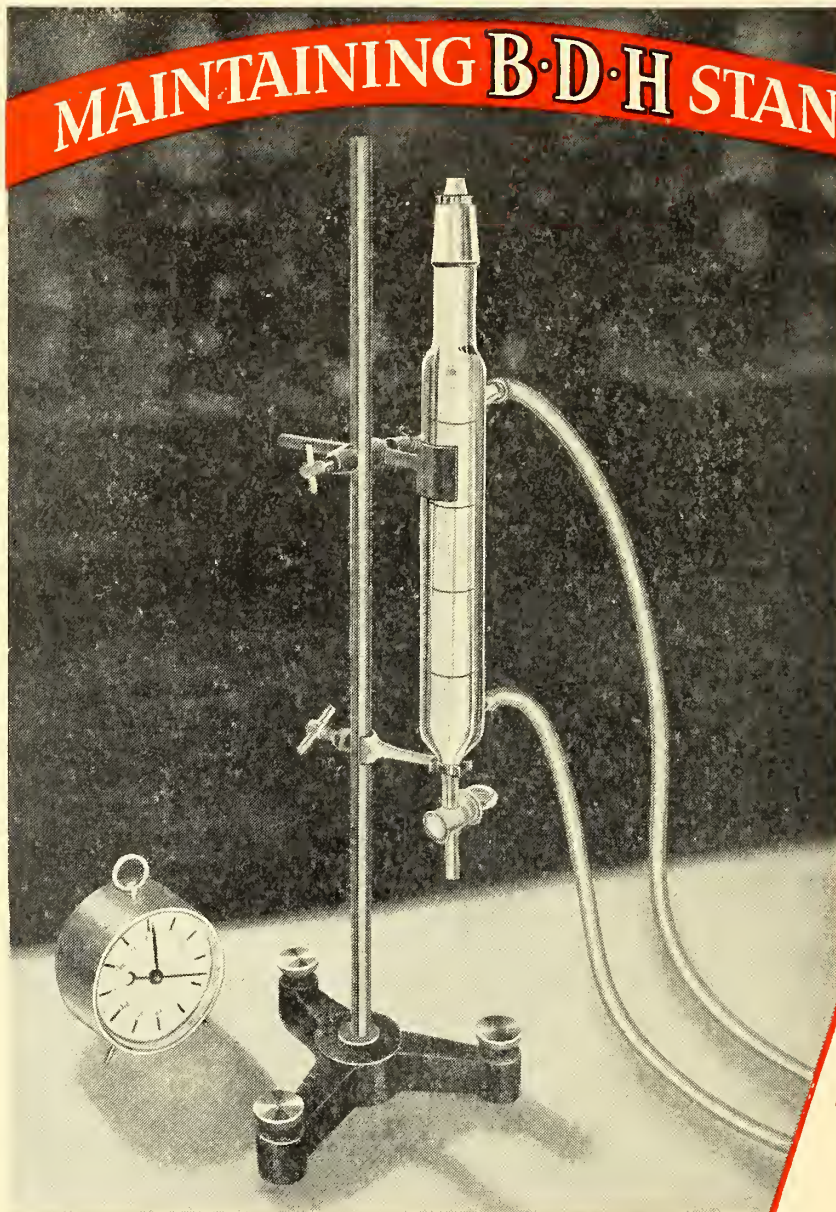
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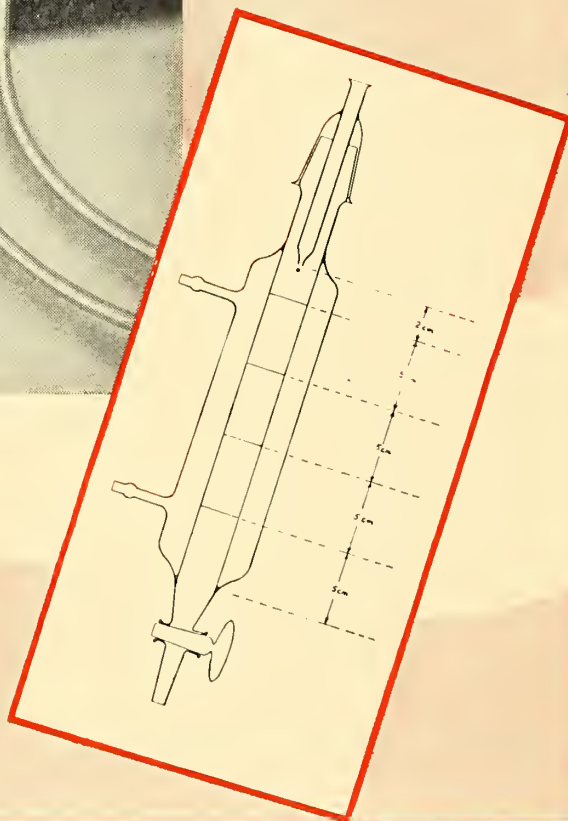


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